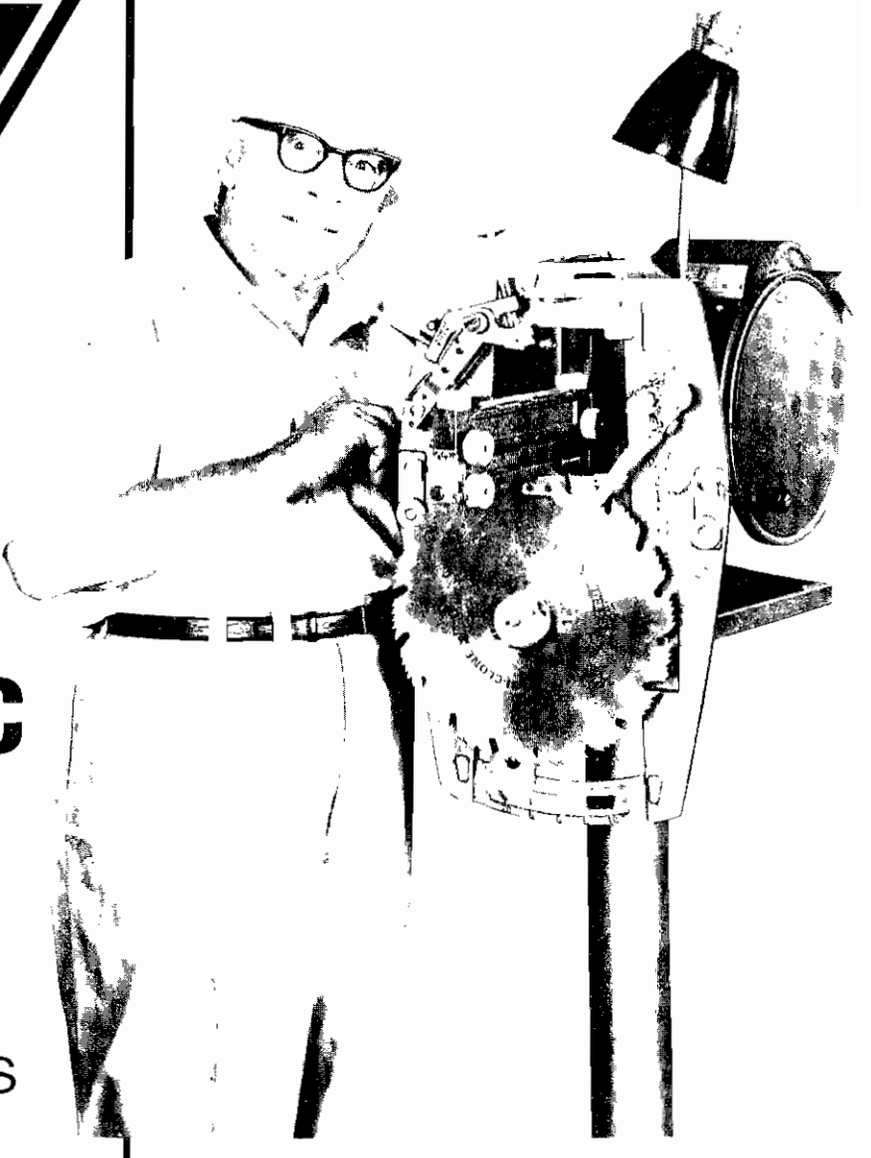
FOLEY BELSAW

OWNERS MANUAL

MODEL 387

AUTOMATIC SAW FILER



— NOTICE —

READ INSTRUCTIONS AND SAFETY RULES BEFORE USING.

ONE YEAR GUARANTEE

All Foley-Belsaw equipment is guaranteed to be sturdily constructed and free of defects in workmanship or material

If within one year from date of shipment, any parts should prove defective, replacement parts will be furnished free of charge when defective part is returned postpaid for inspection

Guarantee does not cover damage sustained in transit or caused by misuse

We reserve the right to make changes in design, construction, or materials on all Foley-Belsaw machines without notice.

THE FOLEY-BELSAW CO. 6301 EQUITABLE ROAD • BOX 593 KANSAS CITY, MO. 64141

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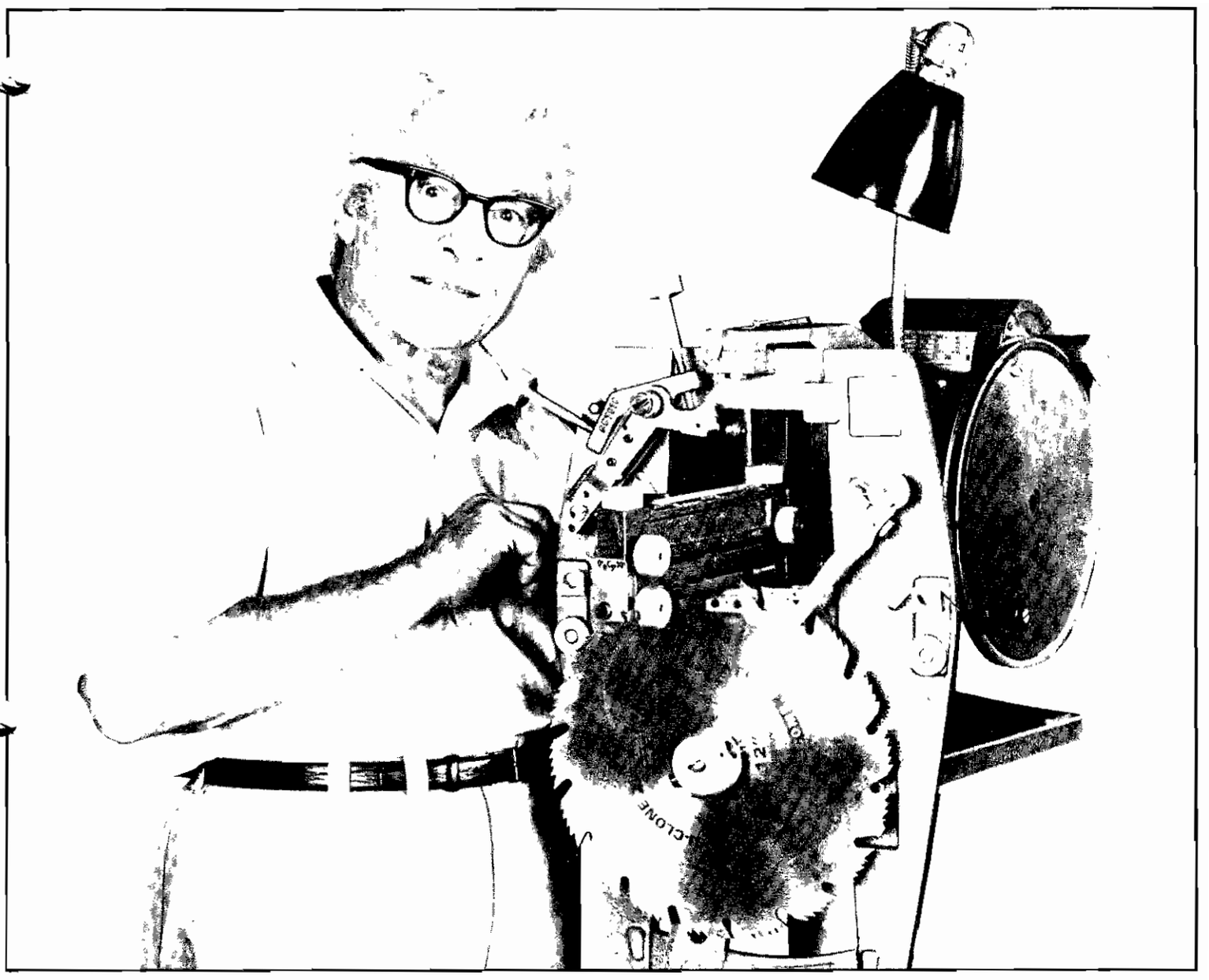


INTRODUCTION

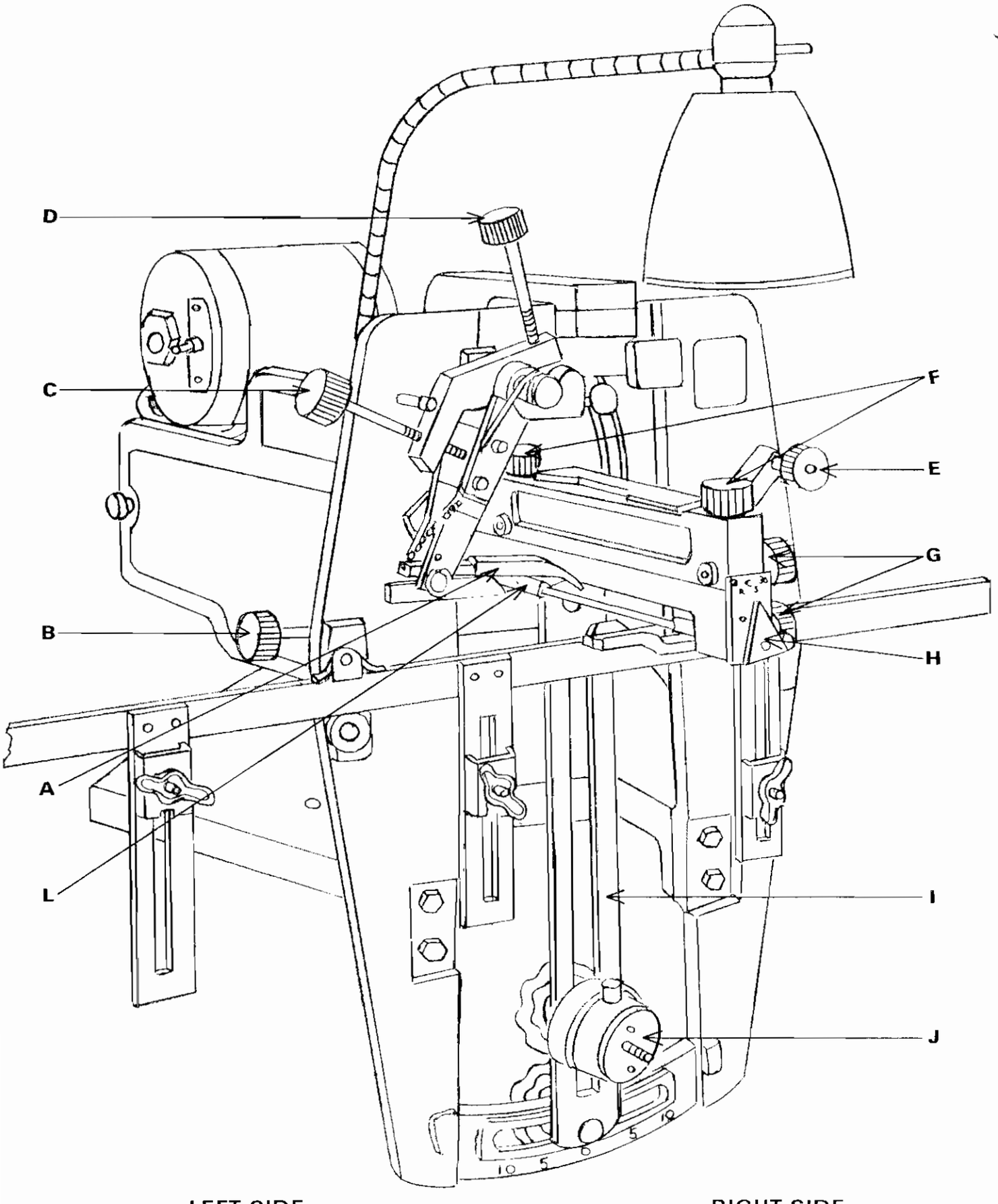
This instruction booklet is designed to teach you how to operate the Foley-Belsaw Model 387 Saw Filer. After you have read this booklet and worked with the 387 filer, you will understand why we call it the HEART of the sharpening business.

With the Model 387 Saw Filer you can sharpen any hand saw, some band saws and many circular saws (excluding carbide saws). For saws that require more than just sharpening Foley-Belsaw has the Model 385 Retoother and Model 392 Automatic Saw Setter.

This booklet will show you how easy the filer is to operate. You will learn how to set the machine up for filing all types of saws. You will see how easy it is to go from hand saws to circular saws. Once you have learned how to operate the machine for one type of saw, you will find that it is just a matter of a few minor adjustments to file a different type of saw.

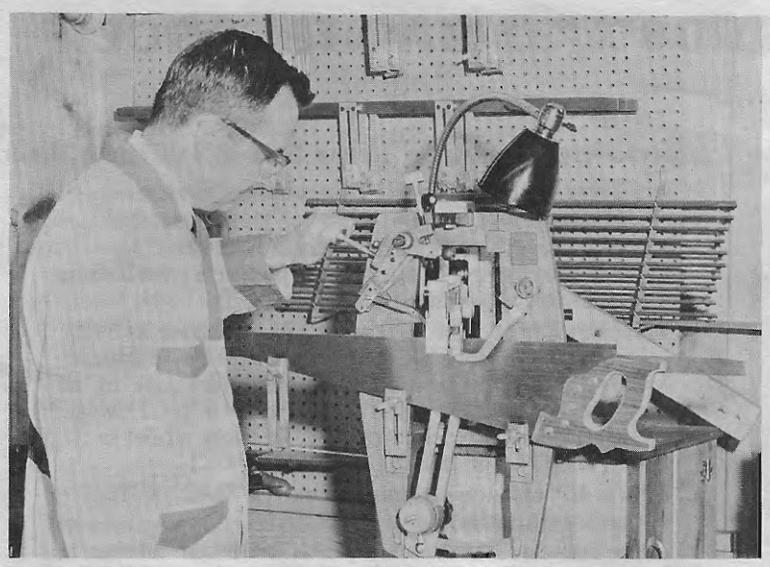
Read the instructions carefully. Follow along on your own filer. PRACTICE!! If you do everything this booklet tells you, you will soon find that your 387 Filer will be the HEART OF YOUR BUSINESS, too.

KEEP THIS PAGE OPEN FOR REFERENCE AS YOU READ THIS INSTRUCTION MANUAL



LEFT SIDE

RIGHT SIDE



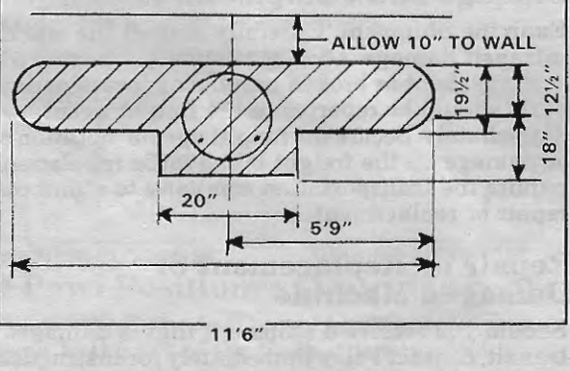
The 387 Filer can be bench or pedestal mounted.

This booklet is designed to help make learning how to operate the 387 Filer as easy as possible. The instructions have been written in easy to understand, non-technical language. There are also many illustrations that help simplify the instructions.

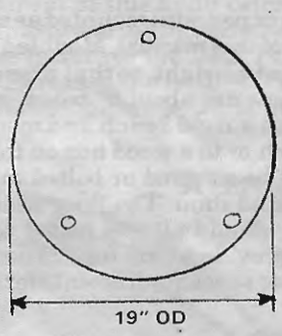
The large drawing of the Model 387 Filer at the left, on the pull out cover page, is the most important diagram in this booklet. It is designed to show you the important parts and controls of your Filer. Keep it open at all times while you are learning how to operate your machine.

FLOOR SPACE REQUIRED FOR MODEL 387 FOLEY FILER

For use with 358568 Pedestal and 358578 Band Saw Attachment.

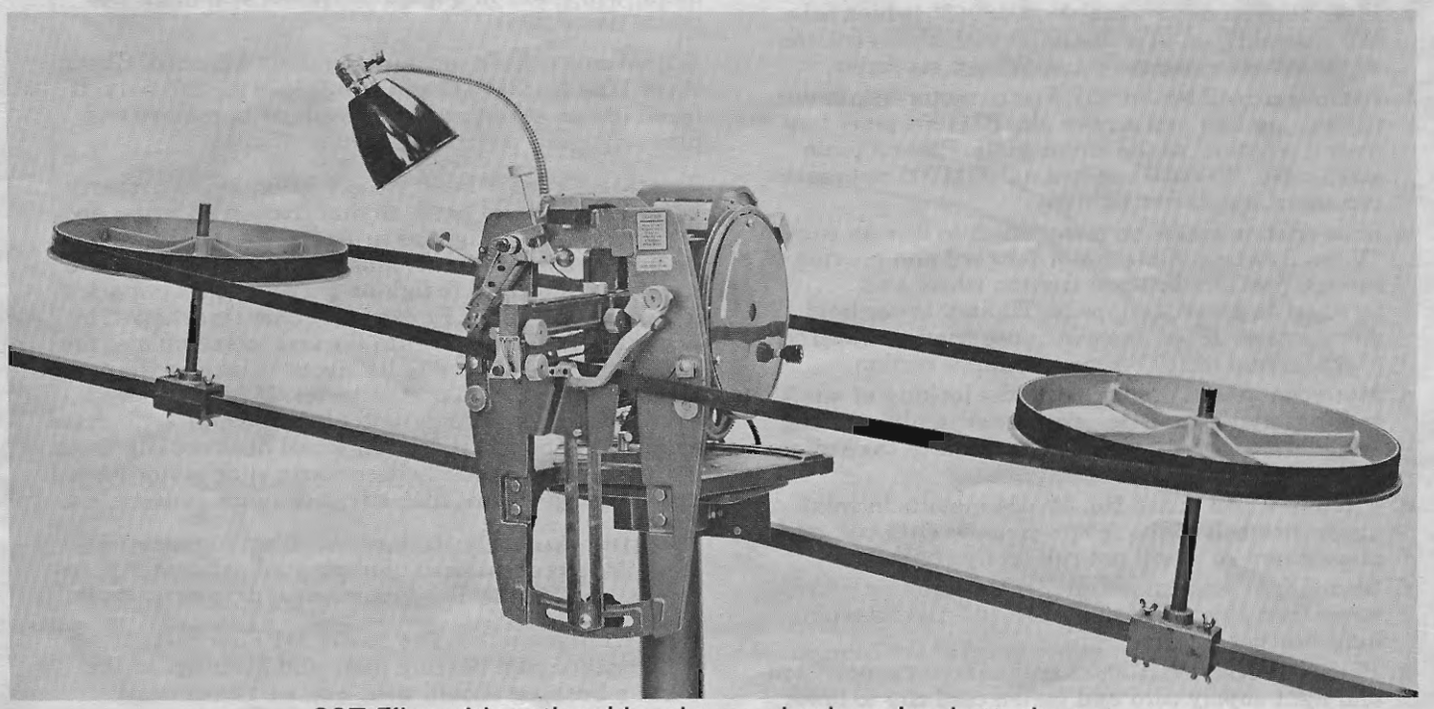


DETAIL OF PEDESTAL SHOWING FOUNDATION HOLES



17/32 DIA. 3 HOLES 120° APART ON 18⅛ DIA. BOLT CIRCLE.

FLOOR SPACE REQUIREMENTS.
THREE ½" DIA. FOUNDATION BOLTS REQ'D 1¼" EXTENDED ABOVE THE FLOOR.



387 Filer with optional band saw wheels and rod attachment.

MACHINE CHARACTERISTICS AND MAINTENANCE

Checking Shipment of Machine for Damage and Completeness

Examine Shipment: Carefully inspect the machine for intransit damage. Look particularly for cracked castings, bent or broken parts. Any loss of or damaged parts should be reported to the freight agent immediately. Secure the freight agents' notation of loss or damage on the freight bill. Traffic regulations require the transportation company to stand cost of repair or replacement.

Repair or Replacement of Damaged Machine

Should you receive a shipment that is damaged in transit, contact Foley immediately for instructions as to how to proceed. Call Toll Free 1-800-328-7140 and ask for Traffic Department.

Setting Up the Saw Filer

Your filer may be bench or pedestal mounted as shown in various illustrations of this manual. Mounted either way, the filer should be at a height, so that when you are filing, the teeth of the saw are about 6" below eye level. For bench mounting, use a rigid bench and mount the filer directly to the bench or to a wood box on top of the bench. The filer should be screwed or bolted to and sit level and firm on its foundation. The floor pedestal, available at extra cost, should also be bolted or lag screwed to the floor to provide a firm foundation for the filer. See diagram on floor space rquirements for the filer.

Mounting Motor to Filer 387-01 (With Motor)

If you have purchased your filer with motor, the following procedure applies:

a. Place friction drive wheel No. 358043* (which is in bag assembly) on to motor shaft with hub of friction wheel towards motor. Do not tighten set screw.

b. Remove shroud No. 387057. Fasten motor onto motor plate using four cap screws No. B311201 placed up from the bottom of the motor plate. Place a plain washer No. R000526 and hex nut J311000 on to each cap screw but do not tighten.

c. Slide friction wheel on motor shaft to line up with "V" in flywheel. Slide motor forward and provide enough pressure between friction wheel and flywheel to prevent slippage. Tighten motor hold down screws. (Slippage will cause friction wheel to overheat and melt.) See maintenance section.

d. Motor rotation: Counter clockwise looking at shaft end. Rotation can be reversed by switching the red and black wire on the spade terminals in the switch box.

e. Friction wheel guard No. 387064 mounts in front upper thru bolt of the motor. Remove thru bolt and place guard so it will not rub on flywheel.

f. Mount light attachment on filer by removing left cap screw from Horn Casting No. 387017 and attaching light bracket.

g. Place Cord Clip No. 370933 around motor supply cord and light supply cord and fasten cord clip to lower rear motor thru bolt.

Mounting Motor to Filer 387-02 (Without Motor)

If you have purchased your filer without motor, the following procedures applies:

a. Check to see that Motor Mount No. 387043* is fastened to filer in the uppermost position (two bottom holes of motor mount).

b. Use a motor of from 1/6 to 1/3 H.P. rating at 1725 rpm. Motor must be built to N.E.M.A. size 48 frame. Motor shaft must rotate clock-wise when looking at shaft end of motor when "V" belt drive is used. (Motor rotation is counter clock-wise if friction wheel is used.) (See Motor Instruction for 387-01.)

c. Use a 40" outside circumference "V" belt of "A" section with pulley furnished.

*Locate these numbers on the parts list. Each number has a diagram number. These diagram numbers will help you locate the part on the blow-up diagram.

Machine Maintenance

Cleaning: Your filer should he kept clean at all times. Keep a small paint brush handy. Use it to brush saw filings off of the filer. Caution: be careful not to brush filings into working parts of the machine. Never use compressed air from a hose.

Lubrication: The filer should be lubricated every 40 hours of machine operation. Remove Cover, Part No. 387057. Wipe away all grit with a soft cloth or cotton waste. Lubricate cam wear pads, pivot shafts and cam shaft with a good grade of S.A.E. 30 wt. motor oil. Wipe off excess oil. Slide rods should be lubricated with a dry silicon lubrication.

MOTOR: Lubricate once a year or 1500 operating hours. Lubricate with S.A.E. 10 wt. motor oil, **3 to 4 drops for each bearing.** Caution: Over lubrication of motor will result in burned out motor windings. See motor name plate.

Adjustment: Keep machine properly adjusted. Check Pivot Pins No. 387033 and No. 387034 for end play. If loose, loosen set screws and re-adjust to remove end play.

Friction Drive Wheel: Keep friction wheel properly adjusted. It should be set so that friction on wheel does not slip, yet not so tight as to overload motor bearings. To adjust, loosen four (4) motor mounting screws and slide motor forward to tighten friction wheel or back to loosen friction wheel. Proper adjustment is achieved by cranking flywheel over until file arm has completed file stroke and has started to lift about ½ inch at the outer end of the file arm. Turn on motor. If friction wheel slips, it is too loose. Slide motor forward only enough to eliminate slipping. If friction wheel does not slip (from start position previously described), slide motor back until slippage occurs, then advance motor as described.

Machine Controls: To increase drag on machine controls to prevent their changing adjustment, tighten set screws C250427. This will increase drag on controls.

Part Replacement: The Model 387 Filer is equipped with replacement bearing pads and bushing. In the event a bushing should wear out, we recommend returning machine component to factory for replacement, as special tools are required for replacement.

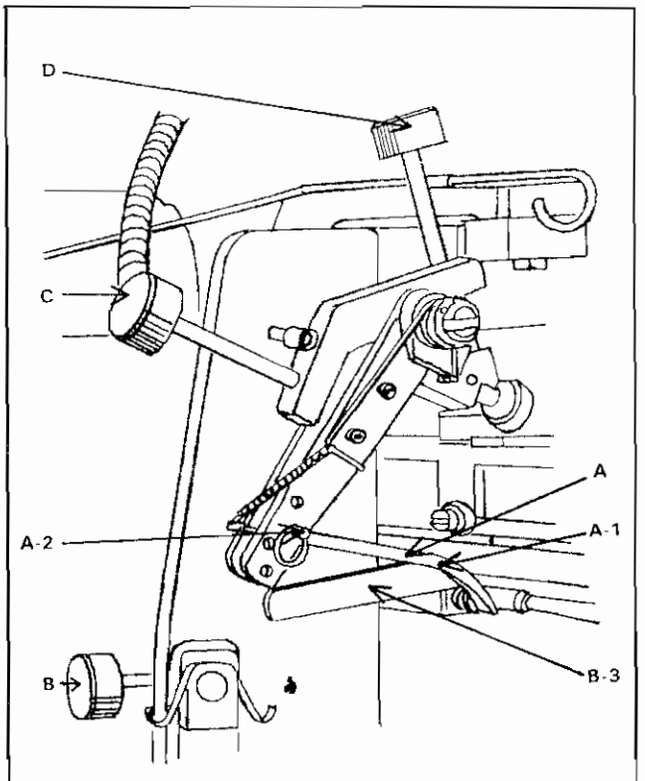
OPERATING CONTROLS FOLEY MODEL 387

Controls

The controls of the Model 387 Saw Filer have been designed for ease of operation while at the same time providing accurate adjustment of the machine. An understanding of these controls is essential for you to operate this filer. Read each description thoroughly . . . locate the control(s) on the detailed diagram on the inside front cover . . . then locate it on your machine. (Keep this diagram open at all times, so that you can refer to it when learning how to operate the machine.)

A. Feed Pawl

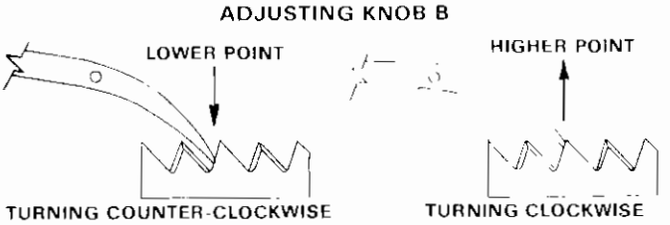
The feed pawl advances the saw and positions the teeth so that the file contacts them in the correct place. The feed pawl **cross pin (A-1)** rides on the jointing guide (B-3). The feed pawl **pivot pin (A-2)** should be in the third hole from the bottom (check your machine). (**NOTE:** Additional holes are provided for less commonly used saws.)



CLOSE-UP VIEW OF FEED PAWL AND CONTROLS

B. Jointing Guide Control (Knob)

This control raises or lowers the feed pawl (A). Notice the feed pawl cross pin (A-1) rests on the jointing guide (B-3). Turning this knob clockwise raises the jointing guide. Turning this knob counter-clockwise lowers the jointing guide. This adjustment will let the feed pawl (A) hit the teeth at a higher point (turning clockwise) or at a lower point (turning counter-clockwise).

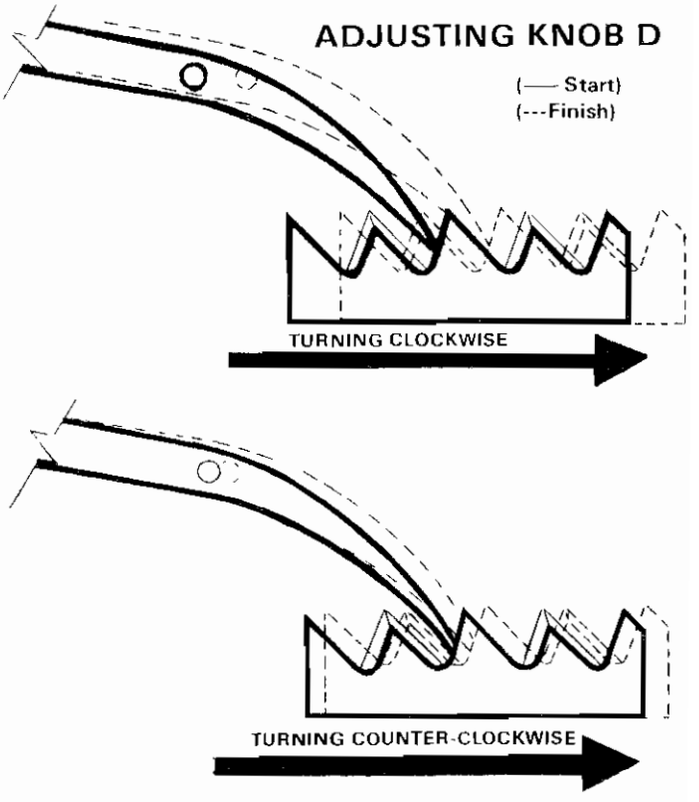


C. Feed Pawl Positioner Control (Knob)

This control positions the feed pawl (A) so that it clears the saw teeth to the left of the tooth it is supposed to enter. (Its adjustment is explained in Section I.)

D. Feed Pawl Stroke Control (Knob)

The adjustment of this knob determines how far the saw is fed (pushed to the right) on each stroke. Turning it clockwise increases the feed. Turning it counter-clockwise decreases the feed. **NOTE:** Minor adjustments can be made while the machine is being motor driven.

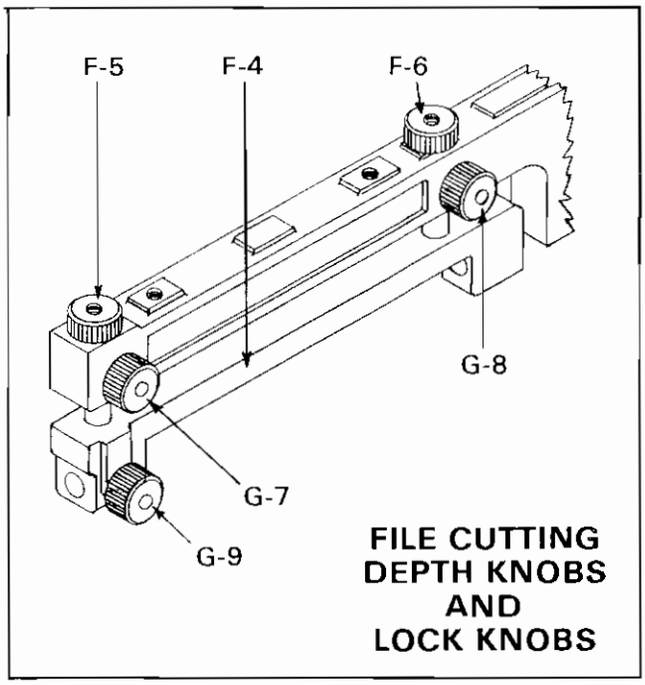


E. Saw Vise Control (Knob)

This knoh tightens or loosens the vise. Turning clockwise tightens it. Turning counter-clockwise loosens it. **"CAUTION":** Never attempt to adjust while machine is being motor driven.

F. File Cutting Depth Control (Two Knobs)

These two knobs (F-5 in front, F-6 in back) raise and lower the file holder assembly (F-4). **"CAUTION":** Never attempt to adjust while machine is being motor driven.

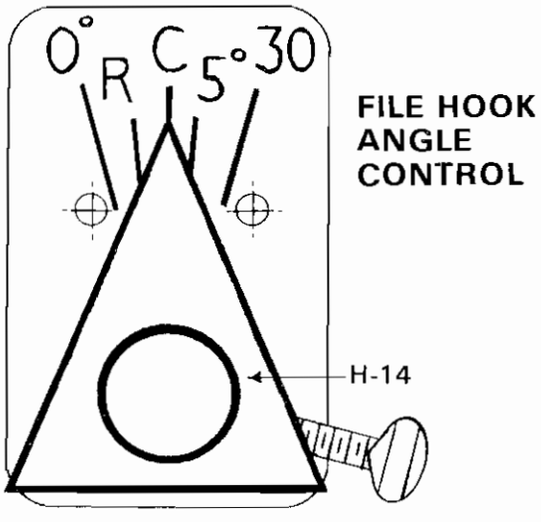


G. Lock Knobs (Three Knobs)

Lock knobs (G-7 and G-8) are used to lock the file depth settings. Knob (G-9) is used to lock the file hook angle setting.

H. File Hook Angle Control (Pointer)

This adjusts the hook angle of the file. Various saws need different hook angles. This control must be locked when operating the filer so that the angle will not change in the middle of a stroke. **NOTE:** For adjustment of hook angle pointer (H-14) see page 9. **"CAUTION":** Never attempt to adjust while machine is being motor driven.



I. Hook Pivot Arm

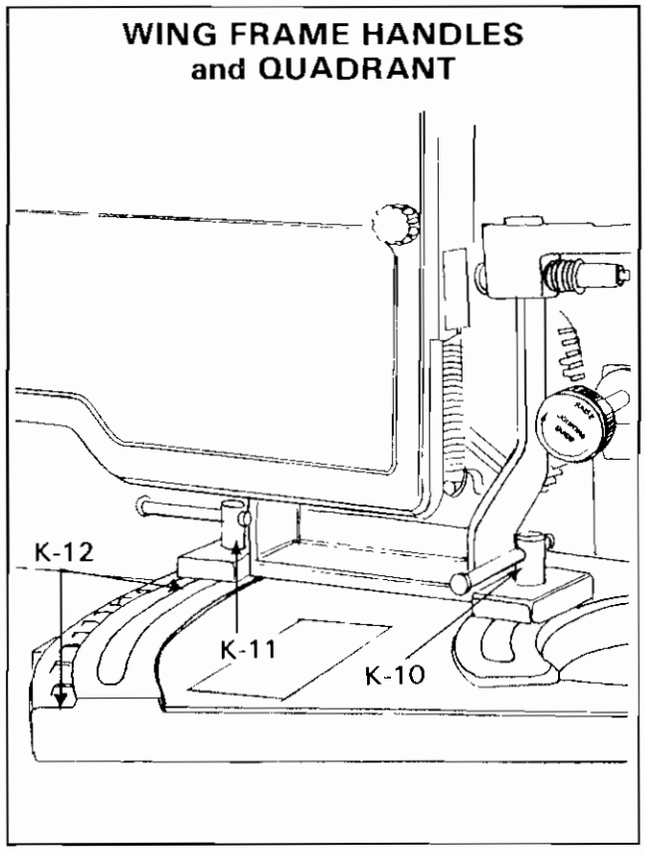
The hook pivot arm provides for filing circular saws having the teeth hooked past the center of the saw.

J. Cone and Cup Assembly

The cone and cup assembly can be adjusted up or down on the hook pivot arm (I) to accommodate circular saws of diameters 1/2" to 1-7/8" arbor holes. (Larger cup and cone available as optional equipment.)

K. Wing Frame Assembly

The wing frame is used to determine the bevel angle of the saw. It can be set right or left up to 30°. It is tightened and loosened by two handles (K-10 & K-11) Degree markings are shown on the quadrant (K-12).



TAKE A FEW EXTRA MOMENTS TO BECOME FULLY FAMILIAR WITH THESE CONTROLS BEFORE PROCEEDING!

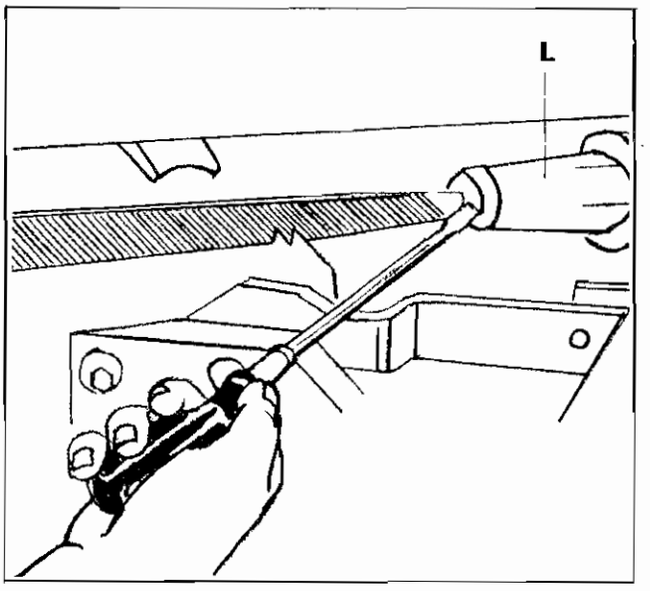
GENERAL INSTRUCTIONS

Instructions for Removing File On Model 387 Filer

NOTE: For your convenience your filer has been shipped with either a slim taper or a regular taper file mounted on it.

Turn the flywheel around until the file is in the highest position. Then take a screw driver as shown in the diagram and push back on the rear file holder (L) until the back end of the file drops down, (CAUTION: Do not let the rear file holder come forward too fast or it will break out the groove holding the retaining ring on the back of the file holder). Then pull the file back towards the machine until the tang end of the file comes out of the front holder.

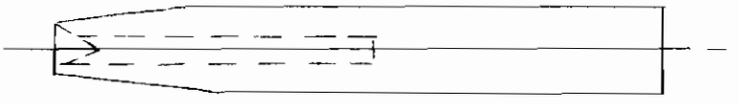
To reinstall a new file put the tang end in the front holder and push back on the rear holder far enough to insert the rear of the file into the rear file holder and release screw driver.



REMOVING FILE FROM FILER

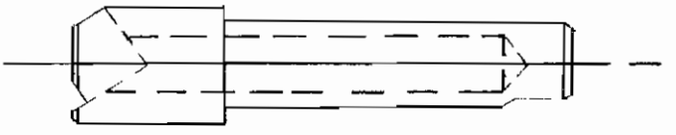
Front File Holders

Description ... Has a (.193) hole, approximately 3/16" diameter (to accommodate tang of file).
Supplied ... With filer in bag assembly.
Use With ... 6" double extra slim files.
6" extra slim files.

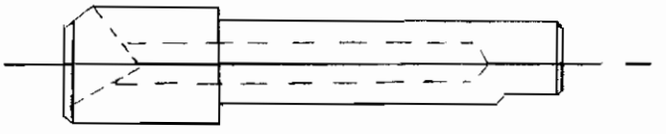


***NOTE: This file holder is similar to rear file holder , **BUT does not have a groove or shoulder.** It is inserted thru the front of the file holder bracket with the file in position. The holder is held in place by Knob G-9.

Description ... Has a shoulder at the front. This holder has a (.290) hole, approximately 9/32 dia. (to accommodate tang of file).
Supplied ... Comes mounted in filer.
Use With ... 6" slim taper, 6" taper, band saw slim taper and tangless 5/8".

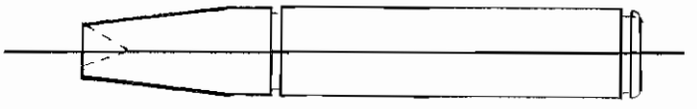


Description ... Has a shoulder at the front. This holder has a (.359) hole, approximately 23/64 dia. (for tang of file).
Supplied ... With filer in bag assembly.
Use With ... 6" regular taper, band saw taper, tangless 5/8" and web saw files.



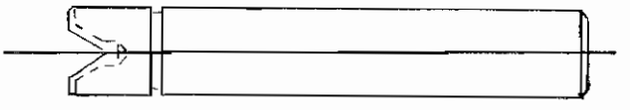
Rear File Holder

Supplied ... Comes mounted in filer.
Use With ... **All standard 3 cornered files.**

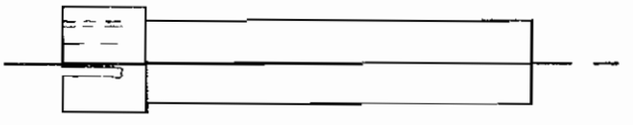


Additional Rear File Holders Available

Supplied ... Special, not supplied with filer.
Use With ... Web saw files (on point of file).



Supplied ... Special, not supplied with filer.
Use With ... Cant files.

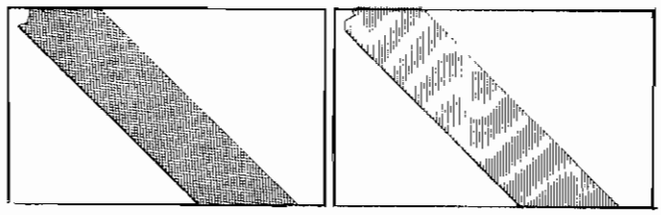


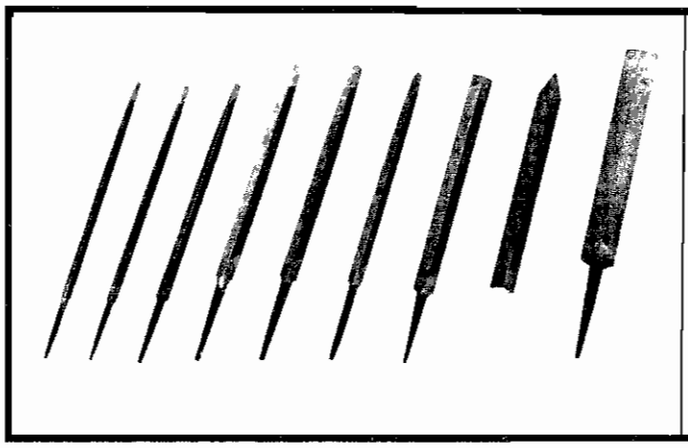
File Types

Files—Single Cut and Double Cut

Some files are available in two different styles. Single cut and double cut. For hand saws we recommend using the double cut files as illustrated on file chart below. Single cut files are used on circular saws. (The double cut file cuts faster).

(FILE CHART)

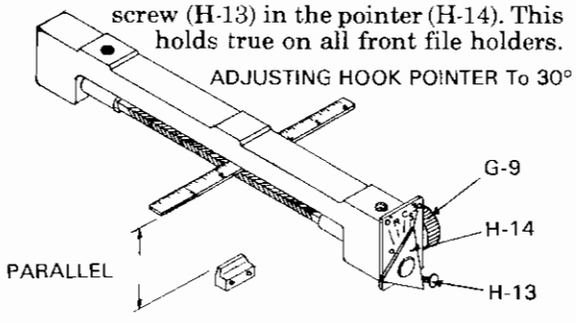




	ILLUST. PART NO.	FILE DESCRIPTION	USED ON
DOUBLE CUT	A	6 inch double extra slim taper	Hand Saws 13 to 16 points
	B	6 inch extra slim taper	Hand Saws 11 to 13 points
	C	6 inch slim taper	Hand Saws 8 to 10 points
	D	6 inch taper	Hand Saws 5 to 7 points
SINGLE CUT	E	6 inch band saw taper	Band and Circ Saws 5 to 7 points
	F	6 inch band saw slim taper	Band and Circ. Saws 8 to 10 points
	G	6 inch cant saw file	Pruning Saws and Teeth Less than 60°
	H	6 inch triangular point ⅝" face	Band and Circ. Saws 4 to 4½ points
	I	6 inch web saw file	Pruning Saws and Teeth Less than 60°

Adjustment of Hook Pointer (H-14)

Whenever you change the front file holder, the pointer has to be reset to the protractor. This is done after you have the file mounted in between the front and rear file holders. Then the file should be set at center pitch or 30° on each side of vertical. This means the file should be flat on top. We suggest that you use a 6" scale laying across the top edge of the file so that you can tell it is perfectly flat or parallel with the vise jaws. Then lock the file holder by tightening knob (G-9). Now set the pointer exactly on the 30° mark and tighten the thumb screw (H-13) in the pointer (H-14). This holds true on all front file holders.

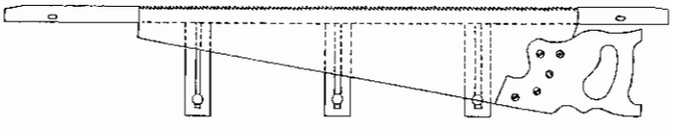


General Set-Up Instructions

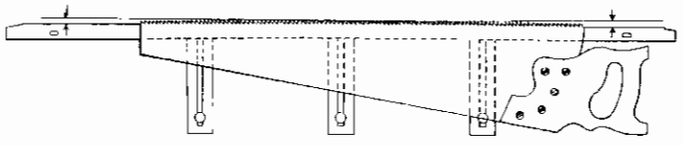
HAND SAW CARRIER BARS

There are three standard carriers supplied with the Model 387 Filer.

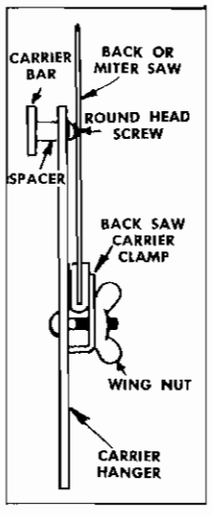
1. Straight Carrier Bar—For use with saws that have a straight toothed edge. (Cross-cut and Rip Style)



2. Crowned Carrier Bar—For use with saws that have a crowned tooth edge. This carrier bar has a 3/16" crown. (Crown of saw must match the carrier. Other carriers are available by special order.)

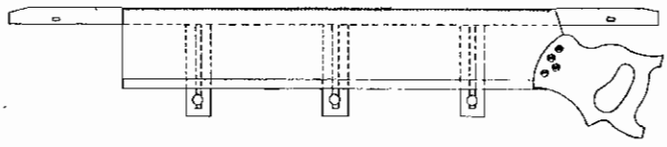


3. Back or Miter Saw Carrier—Same basic construction as #1 but it includes a round head screw to allow for thicker top (stiff back) of miter box and back saws.



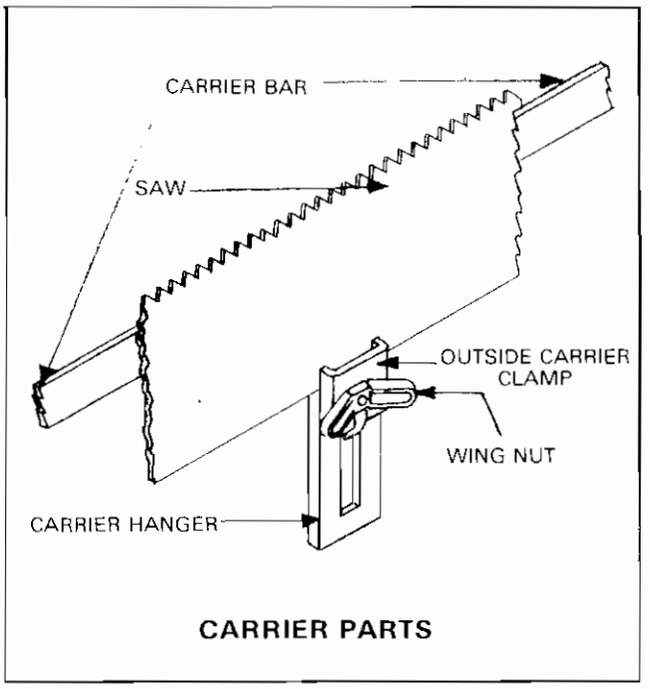
AT RIGHT

Cross section view showing assembly of back or miter box saw



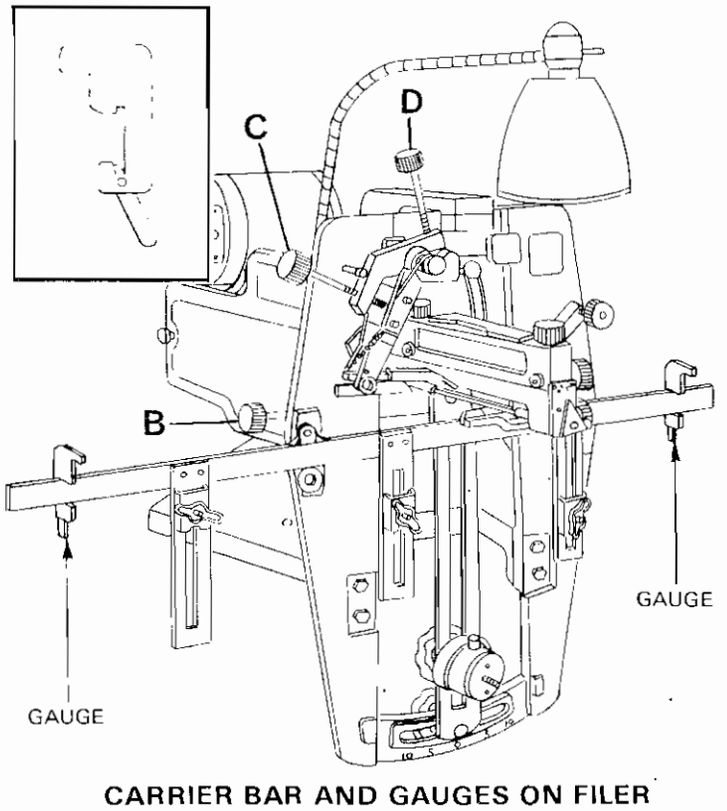
Handsaw Mounting Instructions

1. Slide the carrier bar into the filer. (Make sure the file and the feed pawl (A) are both out of the way.)
2. Loosen the clamps on the hangers so they move up and down.



CARRIER PARTS

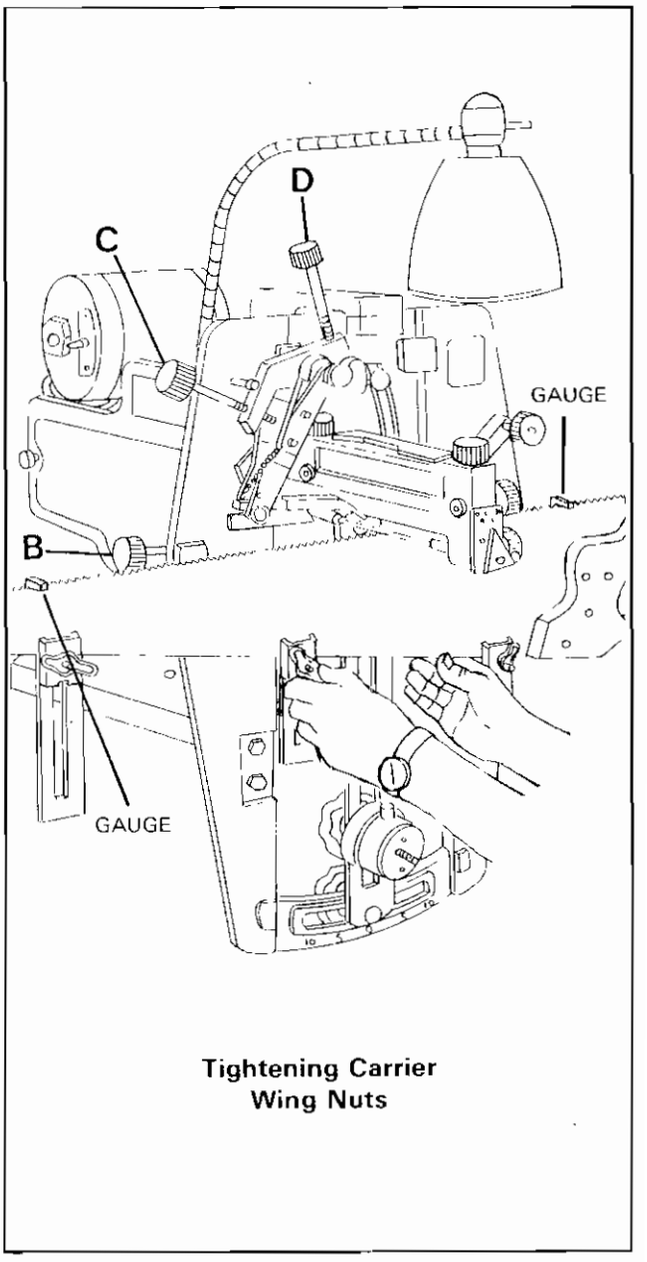
3. Place the gauges on the carrier bars, one on each end, just short of the carrier hangers and lock in place.



CARRIER BAR AND GAUGES ON FILER

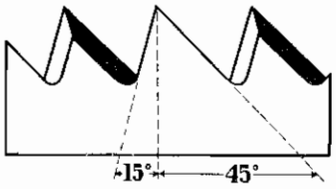
4. Place your saw onto the saw carrier, **with the handle to the right,** making sure the carrier gauges are in the bottom of the gullets at each end of the saw. (Saw must be centered on carrier.)
5. Hold the saw firmly against the carrier gauges and bring up the carrier clamps so that the carrier bolts are touching the back of the saw. Tighten the wing nuts firmly. Remove the saw carrier gauges.
6. After tightening the clamps and removing the gauges, move the carrier back and forth its full length through the vise jaws to be sure the wing nuts, clamps or handle do not strike anything.

When carrier moves back and forth freely, you are ready to set-up the filer for filing.



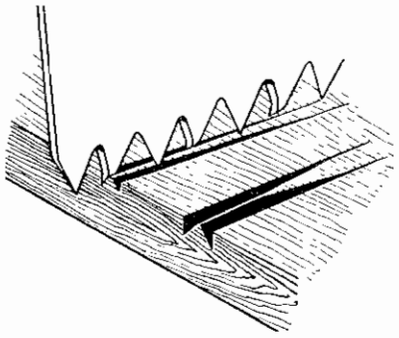
Tightening Carrier Wing Nuts

CROSSCUT HAND SAW



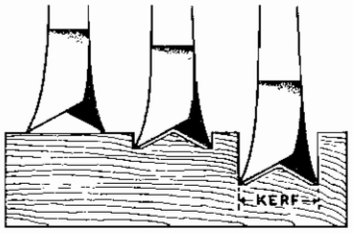
Cross-Cut Saw Teeth

The cross-cut saw is designed for cutting *across the grain* and cuts on the *push stroke*. The front face of cross-cut teeth have an angle of 15 degrees, the back angle is 45 degrees The beveling of the edges of the teeth of about 15 degrees gives the appearance of a series of *knife-like points* which makes for easy identification of a cross-cut saw.



How a Cross-Cut Saw Cuts

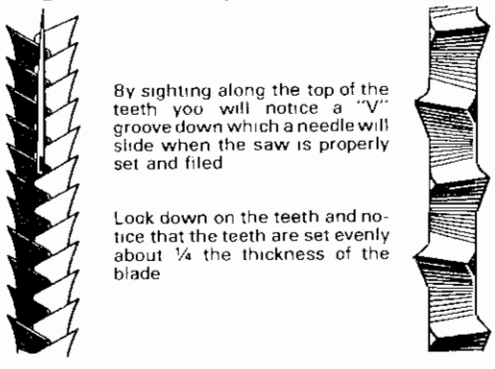
The teeth first score the wood like points of two parallel knife blades as the saw is drawn across the grain Then the edges of the teeth begin paring the groove which is formed and clear the sawdust from the kerf



Cross Section of Cross-Cut Teeth

Notice first the "set" of the teeth . the bending of the teeth to alternate sides to make the cut or "kerf" wider than the thickness of the saw blade For even greater clearance, best quality saws are taper ground . . thinner at the point and back than at butt and teeth. In the above illustrations of the saw cutting into wood, note the knife action, the paring action and the full cut.

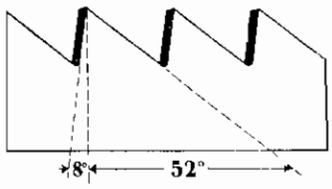
TOP VIEW OF CROSS-CUT TEETH



By sighting along the top of the teeth you will notice a "V" groove down which a needle will slide when the saw is properly set and filed

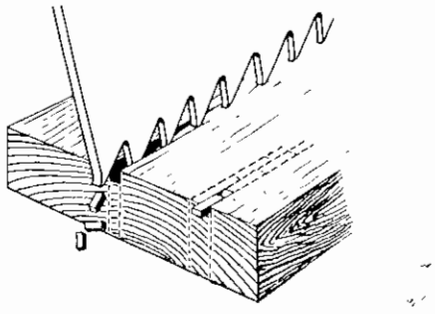
Look down on the teeth and notice that the teeth are set evenly about ¼ the thickness of the blade

RIP HAND SAW



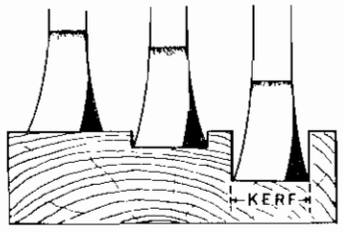
Rip Saw Teeth

The rip saw is designed for cutting *with the grain* and cuts on the *push stroke* The front face of rip teeth has an angle of 8 degrees; the back angle is 52 degrees Rip teeth are filed straight across the face and give the appearance of a series of *chisel edges.*



How a Rip Saw Cuts

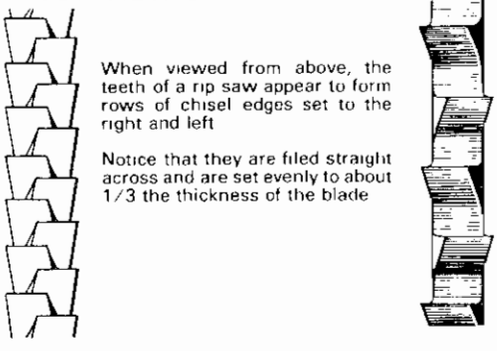
Rip teeth cut like vertical chisels First on one side of the set small pieces of wood are cut loose across the grain and pushed out Then on the other side, the tooth following plows out a similar particle.



Cross Section of Rip Teeth

Examination of the kerf of a rip saw in action clearly illustrates the chisel-like action with which the rip saw cuts. Observe first how the rip saw cuts into the board. Width of the kerf is determined by the set of the teeth, which are bent alternately to the right and left approximately 1/3 of their thickness

TOP VIEW OF RIP SAW TEETH



When viewed from above, the teeth of a rip saw appear to form rows of chisel edges set to the right and left

Notice that they are filed straight across and are set evenly to about 1/3 the thickness of the blade

SECTION I

General Information On Hand Saws

This section gives detailed instructions for filing various types of hand saws. Before reading this part of the manual, you should have thoroughly studied the detailed diagram that folds out and the descriptions of the controls on pages 6 & 7.

NOTE: When filing, the teeth of the saw should be about 6" below eye level on bench mounted machines. Have **good overhead lighting.** Now you are ready to begin operating the Foley Model 387 Saw Filer.

Hand Saws

Before sharpening any hand saw there are a few general steps to follow (these steps pertain to all hand saws).

1. Remove rust by wire brushing or sand paper. **NOTE:** Saw must be clean and smooth where it goes through vise lips.
2. Remove any sharp kinks near the teeth of the blade. Do so by tapping with a small hammer. **NOTE:** A kinked blade will tend to jam in the saw vise lips, causing uneven feed.
3. Examine teeth of the saw by laying the teeth tips on the carrier bar or a flat surface. If the blade is concave (curved inward), the saw should be retoothed. Retoothing can be done on a Foley Retoother. If the saw teeth are of non-uniform size, but reasonably straight, they can be corrected by jointing. (See section on jointing on page .) **NOTE:** Retoothing is accomplished in less time than jointing and preserves the life of your files.
4. Check the saw for "set" (use a #357500 Dial Indicator). The teeth should be "set" an equal amount on each side to produce a sufficient kerf (width of cut) when the saw is used. When "setting" is required, do so before filing. Use Foley's Model 352 Automatic Saw Setter.
5. Mount the saw on the correct saw carrier. Straight carrier for straight saws, crowned carrier for crowned saws and miter and back saw carriers for miter and back saws.
   (See carrier instructions page9)

Detailed Instructions on How to Set-Up and Sharpen Cross-Cut Hand Saws

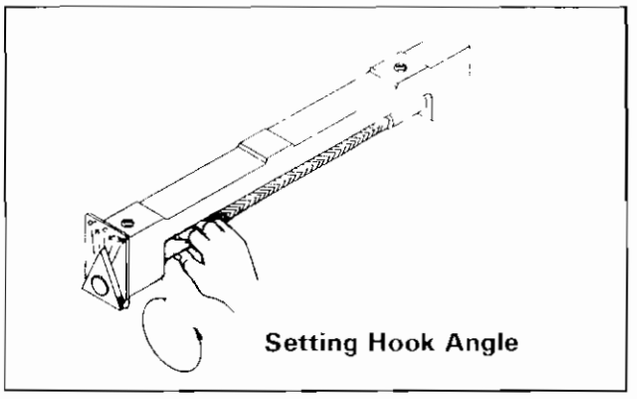
Read one step at a time. Study any diagram that follows it. When you understand the step, duplicate it on your filer. Re-read the step to make sure you have done it correctly. Then go on to the next step and repeat this process.

> ***NOTE:** Cross-cut and Rip Style hand saws are sharpened in the same basic manner, with slight variations. The variations that occur when sharpening Rip Style hand saws are listed on page 14 of this section.
> **An "*" marks the steps that are different.**

1. General steps (1 thru 5) from page
2. Insert the correct file into the front and rear file holders with tang of file **towards** the front. (Check pages 8 & 9).
3. Tighten vise knob (E) so that the saw will advance thru the vise with a slight drag. **DO NOT CHANGE VISE SETTING AFTER FILING HAS STARTED!!!**

Setting the Hook and Bevel Angles

*4. Loosen file lock knob (G-9). **NOTE:** Your file should already be set on 30° as-per-instructions on page (Adjustment of Hook Pointer). After loosening knob (G-9), take hold of the front file socket holder and turn counter-clockwise until the hook angle pointer (H-14) is pointing to "C" which equals 15° hook angle.

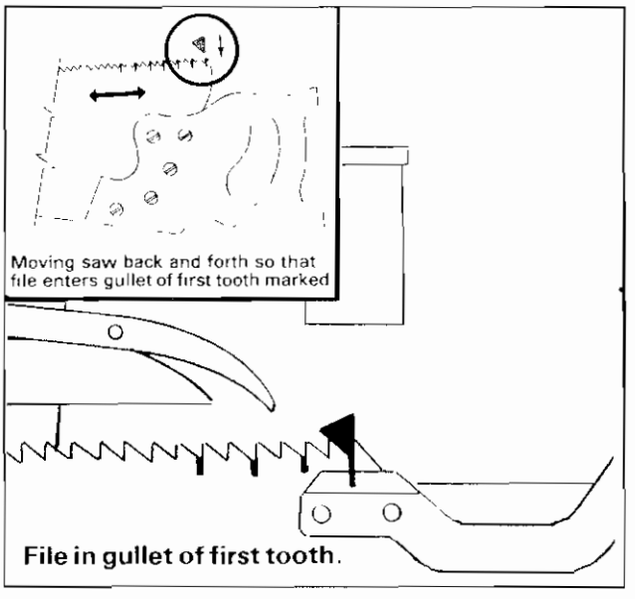


Setting Hook Angle

*5. Loosen handles (K-10 & K-11) on the wing frame (K). Swing the wing frame to the right (towards the flywheel) and lock it on 15° bevel angle.

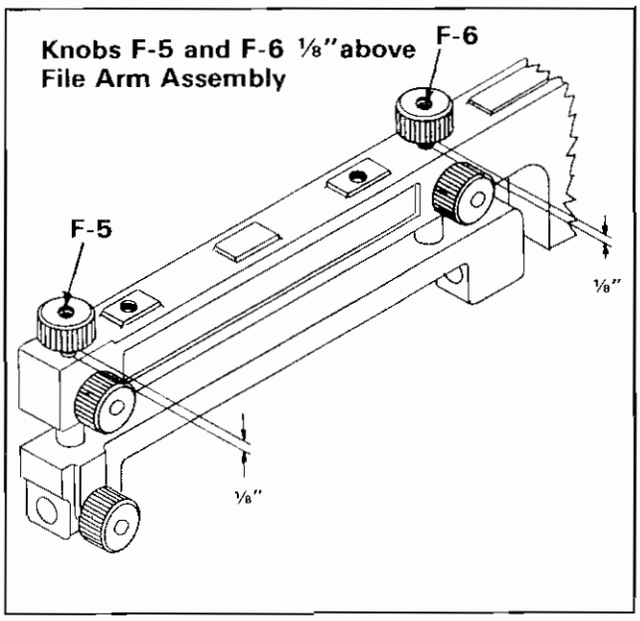
Setting File Depth

*6. Mark the first 7 teeth "set" or leaning towards you (away from the filer). Now turn the flywheel clockwise (in the direction of the arrow) until the file comes down towards the saw. Move the saw back and forth until the file enters into the gullet in front of the first tooth marked. Do not let the file travel through the tooth.

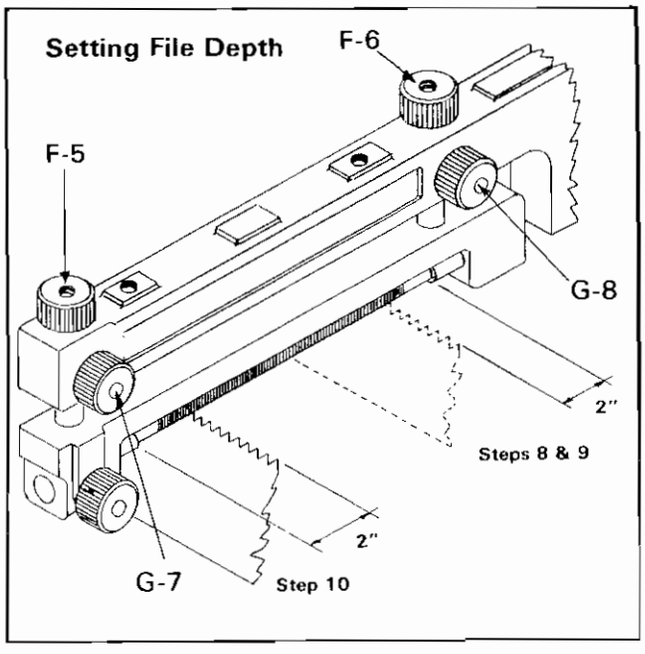


File in gullet of first tooth.

7. Loosen the two file lock knobs (G-7 & G-8). Next loosen the two file depth knobs (F-5 & F-6) until they are approximately 1/8" above the file arm assembly. **STOP!!!** This allows the file to drop into the saw gullet.

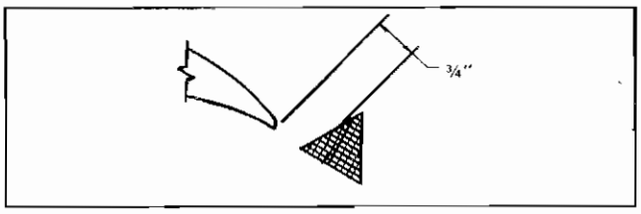


8. Turn the flywheel clockwise until the file travels about 2" through the saw. **STOP!!!** Turn the flywheel counter-clockwise (in the opposite direction of the arrow) 1/4 of a turn. **STOP!!!**
9. Turn the rear file **depth knob (F-6)** until it rests on the file arm assembly. Now turn knob (F-6) 1/4 of a turn clockwise. **STOP!!!**
10. Now turn the flywheel clockwise until the file is about 2" from the front end. **DO NOT BACK THE FLYWHEEL UP THIS TIME, BUT** spin the **depth knob (F-5)** until it rests on the file arm assembly. Then turn it 1/4 of a turn clockwise. Now tighten (turning clockwise) both **file lock knobs (G-7 & G-8).** Your file is now locked in place.

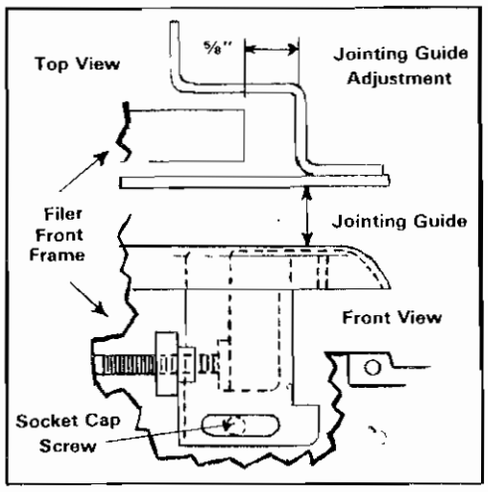


Adjusting the Feed

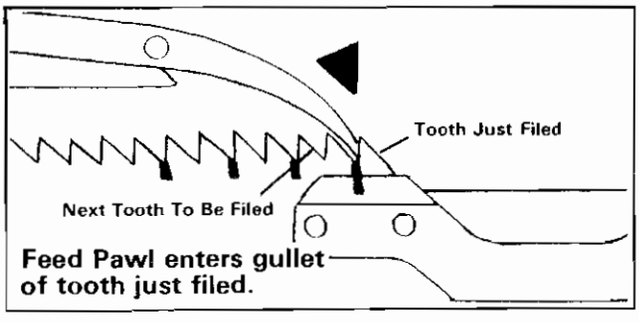
11. At this point your file should be in the gullet of the first tooth to be filed (in front of the first tooth marked). Turn your feed pawl positioner knob (C) until the feed pawl (A) is 3/4" away from the file's left edge. **DO NOT TOUCH THIS KNOB AGAIN!!!** This adjustment should not have to be made again on any hand saw.



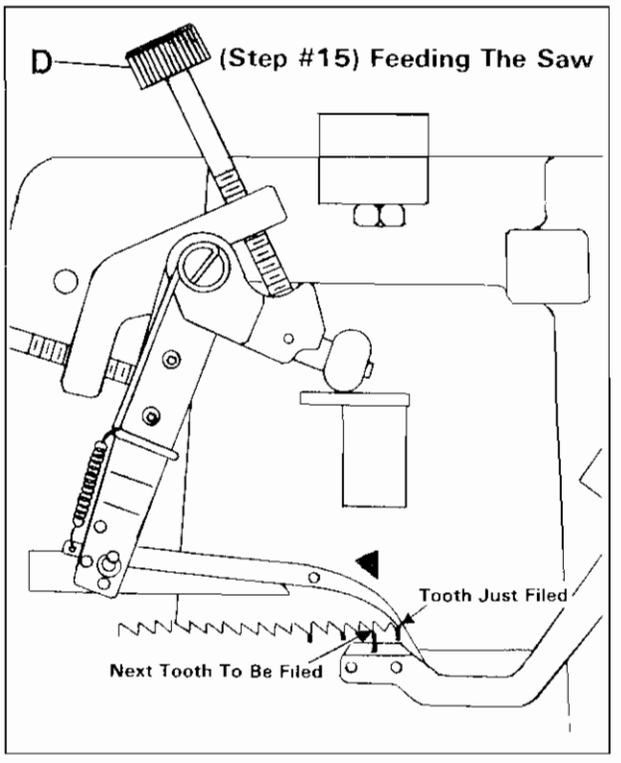
12. Now adjust your jointing guide knob (B) so that the jointing guide (B-3) is parallel (level) with the saw carrier. Loosen the socket cap screw in back of the jointing guide (B-3). Adjust the jointing guide so that it is 5/8" from the filer front (frame) and tighten the socket cap screw. (SEE DIAGRAM BELOW.)



13. Put a mark exactly under the file on the vise lip, as shown.
14. Turn the flywheel clockwise until the feed pawl (A) enters the gullet of the tooth just sharpened. **NOTE:** You may have to rock the flywheel back and forth while at the same time turning the jointing guide adjusting knob (B) clockwise and counter-clockwise until the feed pawl (A) drops into the bottom of the gullet. Once the feed pawl is in the bottom of the gullet, turn the jointing guide knob (B) clockwise until the feed pawl raises just off the bottom of the gullet.



*15. Turn the flywheel by hand until the feed pawl (A) reaches end of stroke. If the next gullet (the gullet to the left of the next tooth marked) does not line-up directly with the line on the vise lip, turn the feed pawl stroke knob (D) clockwise to advance the amount of feed ... or ... counter-clockwise to decrease the amount of feed (which ever is necessary). **NOTE:** Turn the flywheel by hand, repeating this step until saw is feeding correctly.



16. When the file enters the next gullet of the tooth that is marked and crowds the saw so that it moves very slightly to the right as the file passes across the face of the tooth ... turn on your machine and file all the faces of the teeth "set" towards you.

*17. You now sharpen all the teeth "set" away from you (leaning towards the filer). Push the saw to the starting point so that the bottom of the gullet of the first tooth not marked is in line with the vise lip mark.

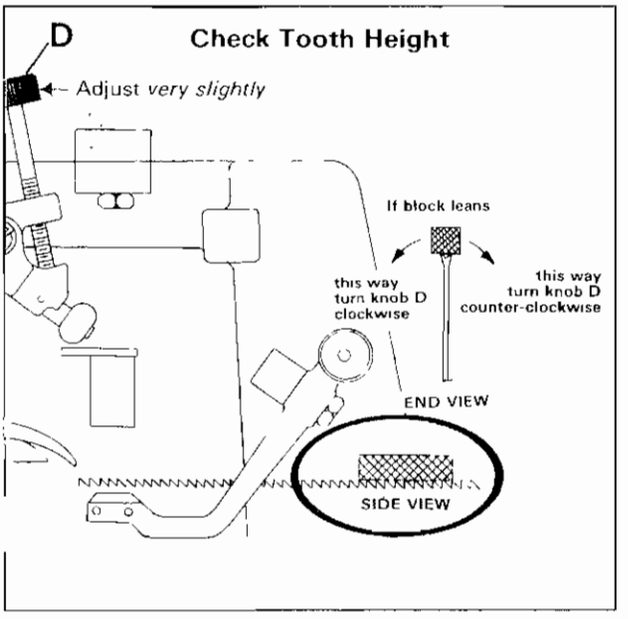
18. Swing the wing frame to the left (away from the flywheel) and stop at 15° for the bevel angle.

19. Minor adjustments of the feed pawl stroke knob (D) may be necessary.

20. Check the jointing guide knob (B) to see if adjustment is needed. You should be crowding the back of the tooth "set" towards you. File two or three teeth by hand to check for correct adjustments.

21. Turn on the machine and file about 15 teeth and STOP!!! Check the tooth height by balancing a flat metal block on the top of the teeth. If the block leans either direction (away from the filer or towards it) turn the feed adjustment knob (D) the opposite way the block leans. **NOTE: TURN KNOB (D) VERY VERY SLIGHTLY, OVER ADJUSTMENT MEANS TROUBLE!** (Check illustration below.)

22. Now turn on the machine and finish the saw.



Instructions for Sharpening Miter Box and Back Saws

Miter box and back saws are fine-toothed blades having a straight cutting edge and a heavy, stiff back. They are filed in much the same manner as regular cross-cut hand saws. Be sure to use carrier bar No. 358581. (See page 9) Observe care in making feed adjustments, since back and miter box saws have fine teeth. Use light file pressure in both jointing and in bevel filling; the saws are thin gauge steel, and joint easily. Where teeth are very uneven, it is faster to retooth with the Foley Automatic Retoother, before filing is started.

Instructions for Sharpening Rip Style Hand Saws

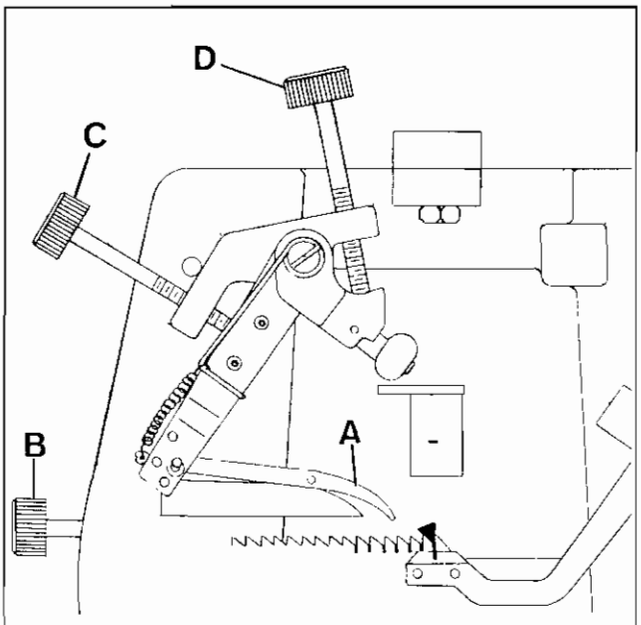
The Rip Style hand saw is sharpened in a similar manner to that of a cross-cut hand saw, with the exception of the steps listed below. **NOTE:** The wing frame is set on 0°; the hook angle pointer (H-14) is set on "R" which is equal to 8° hook angle; the feed pawl stroke knob (D) is set to feed **one tooth** at a time.

Substitute These Steps When Sharpening Rip Style Hand Saws:

4. Hook angle pointer (H-14) is adjusted to point at "R" which equals 8° hook angle for rip style hand saws.

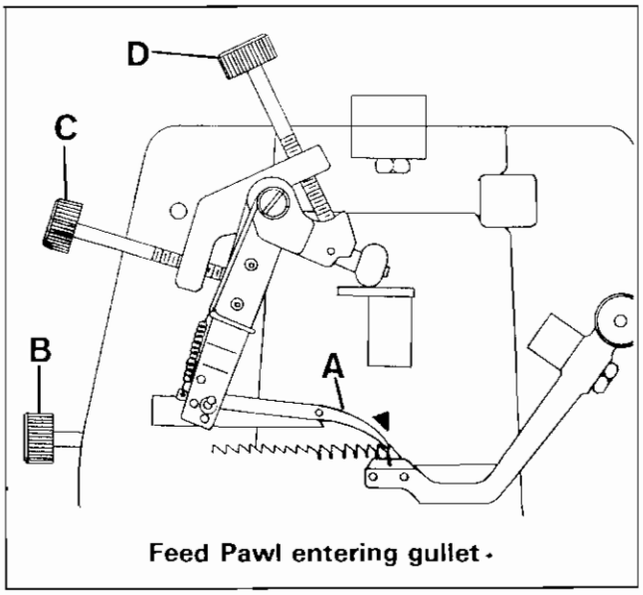
5. The wing frame (K) is set on 0° (straight ahead). **NOTE:** There isn't any bevel angle on a rip style hand saw.

6. You don't have to mark teeth since you file all the teeth at the same angle.

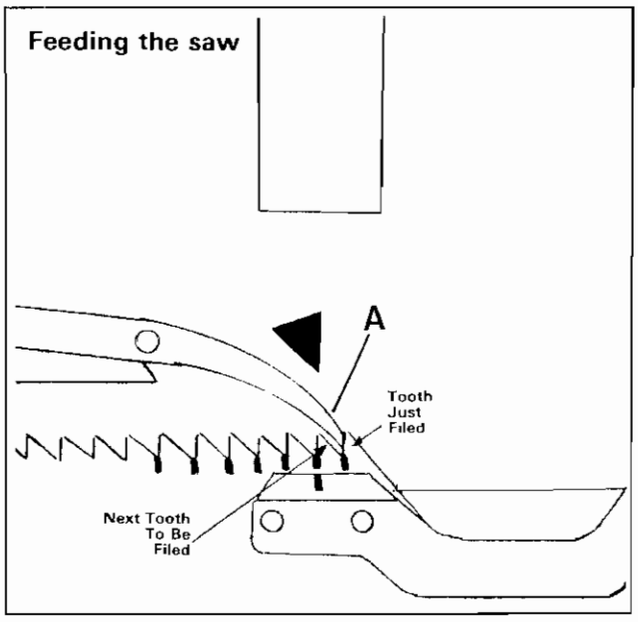


File in gullet of first tooth.

15. The feed pawl stroke control (D) is adjusted to feed **one tooth** at a time.



Feed Pawl entering gullet.



17. You turn on the motor and sharpen all the teeth. You are then finished sharpening a Rip Style hand saw.

NOTE: The remaining steps (1 - 3; 7 - 14; 16) are the same for both rip style and cross-cut hand saws.

JOINTING

Cross-Cut and Rip Style Hand Saws

Jointing is a method by which the teeth of a hand saw can be made uniform as to height and size. The procedure for jointing a rip or cross-cut hand saw is identical to the procedure for sharpening a rip tooth saw. **NOTE:** The hook angle adjustment for a cross-cut hand saw is different than that for a rip style hand saw.

All jointing for both styles of saws is done with the Wing Frame (K) set at 0° (straight ahead). The Hook Angle Pointer is set on "R" (8°) for rip style saws; on "C" (15°) for cross-cut saws.

Jointing is done only when there are **slight variations** in tooth height and size. If the teeth are extremely non-uniform the saw should be retoothed, set and filed. **DO NOT JOINT FILE A SAW AFTER RETOOTHING IS DONE WITH THE FOLEY POWER RETOOTHER.**

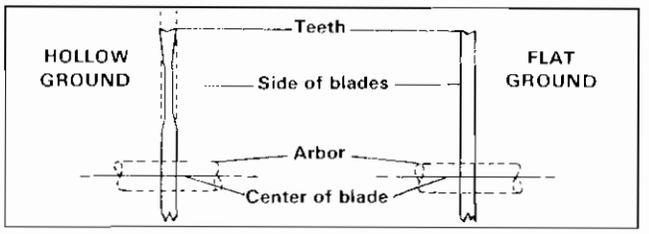
SECTION II

GENERAL INFORMATION ON CIRCULAR SAWS (ALL TYPES)

The Foley Model 387 Saw Filer can sharpen some styles of circular saw blades. These include rip, cross-cut and combination types. Machine capacity range is 5" to 24" diameter.

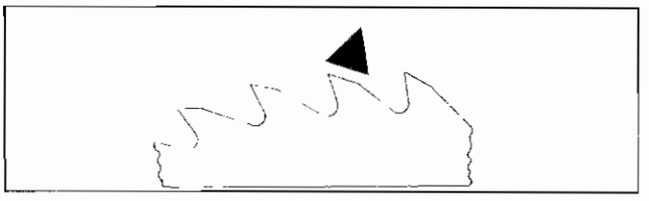
Before sharpening any circular saw you should follow these steps:

1. Examine the saw blade for general conditions.
2. If blade has excessive rust or wood pitch, remove with a wire brush or chemicals. (Use a Foley saw polisher.)
3. Check gullets of saw for uniform size and cracks. If cracks exist, discard the blade.
4. Check the saw blade for "out of round". If the blade has been hand filed, some of the teeth may be higher than others. Slight variations in tooth height can be corrected by the Model 387 Filer, but if variations of .040-.060 exist in the height of the teeth, considerable filing time will be required.
5. Examine the saw teeth for "set" in flat ground style of circular saws (hollow ground blades do not require "set"). If "setting" is needed, do so before machine filing.



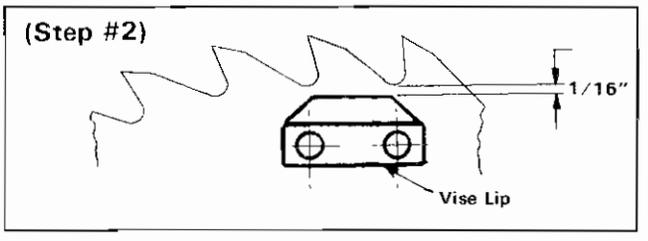
Instructions for Sharpening Circular Rip Saws

(Round Gullet, Chisel Tooth Style)

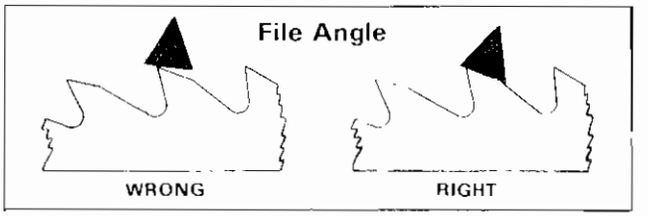


1. Set the wing frame (K) on 0°. Select the correct file and file holders. The file should be wide enough to cover the top of the tooth as shown above. (See file chart on page 9.)

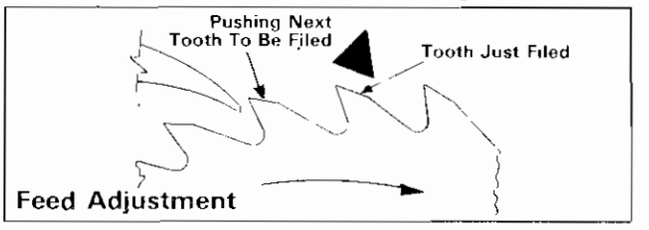
2. Set the hook pivot arm (I) at 10° left. Mount the saw blade in the filer so that the bottom of the saw gullets are about 1/16" above the top of the vise lip. Tighten vise control (E) and adjust for a reasonable amount of drag.



3. Set file angle and depth by cranking the flywheel in the direction of the arrow until the file is positioned over the saw tooth and midway through its file stroke. The file should be flat against the top of the tooth, touching it very lightly.



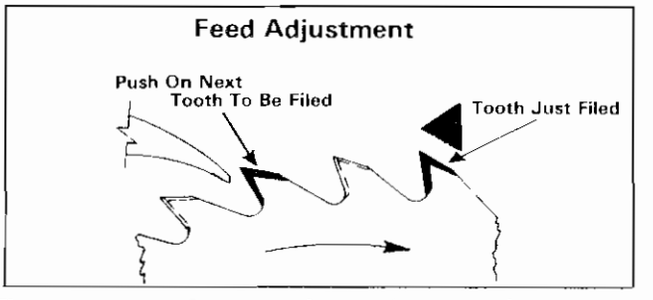
4. Adjust the jointing guide control (B) so that the feed pawl (A) enters the gullet of the next tooth to be filed. **NOTE:** Watch where the feed pawl strikes the tooth. Mark the first tooth with a marking pencil.



5. Set the feed pawl stroke knob (D) to feed the saw one tooth at a time. Turn the flywheel by hand to check the amount of feed.
6. Turn on the motor and begin filing. If saw crowds to the left decrease the feed. (Turn the feed stroke control (D) counter-clockwise.)
7. Let the saw make one complete turn then check the points of the teeth. If they are not sharp, it may be necessary to increase the feed, **very slightly.** Then go around once more or until it is sharp.

Instructions for Sharpening Combination Circular Saws

(Round Gullet, Chisel Tooth Style)



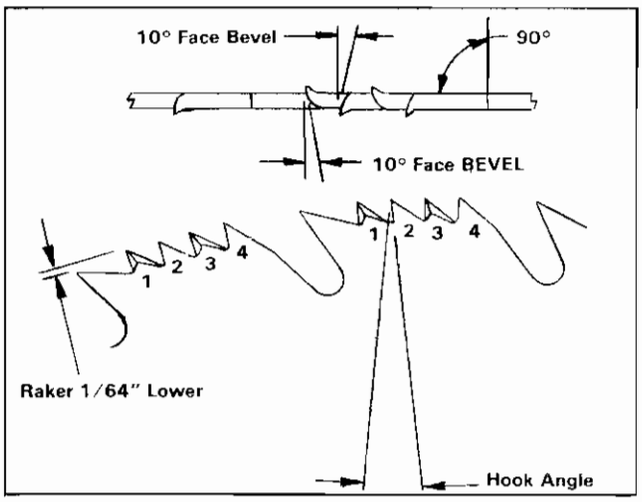
These saws use the same sharpening procedure as Circular Rip Saws with one difference. The tops of the teeth have to be filed with a 15° alternate bevel.

NOTE: You will have to adjust the feed pawl stroke knob (D) to feed two teeth at a time.

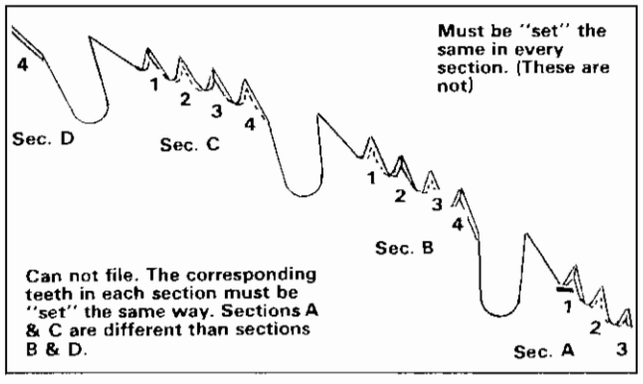
First you swing the wing frame (K) right to 15° and file every tooth leaning towards the filer. (Do every other tooth all the way around.) Then swing the wing frame (K) left to 15° and file every tooth leaning away from the filer.

Instructions for Sharpening Combination Circular Saws

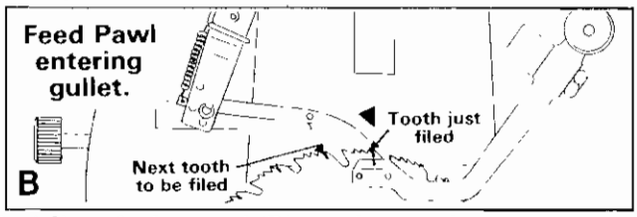
(Four Teeth and Raker Style)



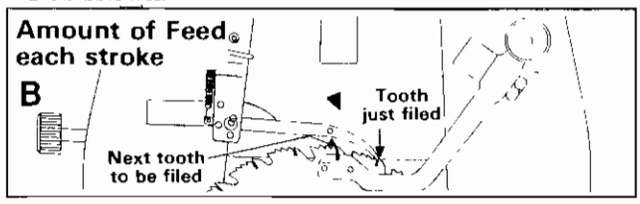
There are two basic styles — four teeth and a raker or two teeth and a raker. This saw will both rip and cross-cut. The sections of four teeth are "set" alternately and do the cross-cutting. The raker tooth is not "set" and does the rip cutting. **NOTE:** Every section on the saw must be identical. If teeth 2 and 4 are "set" away from the filer in section #1, the corresponding teeth 2 and 4 in the remaining sections must also be "set" away from the filer.



1. Examine saw condition. If gumming is needed, gum only the gullets of the raker teeth. If jointing is necessary, file the cross-cut teeth with the wing frame (K) set on 0°.
2. Select the correct file and file holder. **NOTE:** You will be filing the combination teeth (the cross-cut teeth) first. Therefore select a file and holder for them first. (See File Chart.)
3. Set hook pivot arm (I) at 10° left.
4. Set file hook angle (H-14) at "0" mark. This setting will maintain a 10° hook on the cross-cut teeth. **NOTE:** With the pointer (H-14) set at "R", a two degree hook on the cross-cut teeth will be maintained.
5. Set the wing frame (K) at 10° right. Mount the saw on the cup and cone (J) and adjust vise tension for a moderate amount of drag.
6. Adjust file depth for a light cut.
7. **Note the "set" in the cross-cut teeth.** Set the file in the gullet of the last tooth that is "set" towards you. Example: The file should have a tooth "set" towards you on the right and a tooth "set" away from you on the left.
8. Advance the flywheel in the direction of the arrow while at the same time adjusting the jointing guide knob (B) to permit the feed pawl (A) to drop into the gullet of the tooth just filed. Mark this gullet with a crayon.



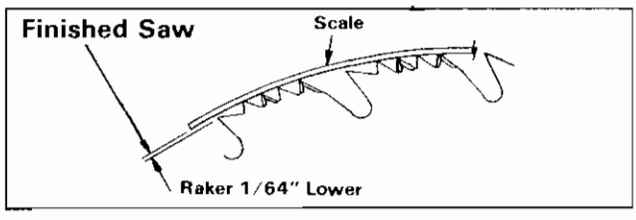
9. Adjust feed control (D) to advance the saw one complete saw section, advance from point 1 to point 2 as shown.



10. Turn the filer by hand to make sure the file drops into the same gullet in the next section. Make needed adjustments. (Mark the last section to be filed with a crayon.) Turn on the motor and file one tooth in each section of the saw; stopping the machine in the last section to be filed.
11. Advance the saw two teeth. **EXAMPLE:** If you started filing tooth #3, advance the saw and drop the feed pawl in front of tooth #1. If you started filing #4 move the saw so that you will be filing #2 next.
12. Check the set-up by hand cranking the filer to make sure you are filing the same spot in the next section. Turn on the machine and stop in the last section, as before.
13. Swing the wing frame (K) 10° left. **NOTE:** Do not change the depth of file cut. Now file the remaining teeth of each section. **EXAMPLE:** If you have already sharpened teeth 3 and 1, you will now file tooth #4 in every section, then tooth #2 in every section. **NOTE:** You should now be sharpening the teeth that are "set" towards the filer.

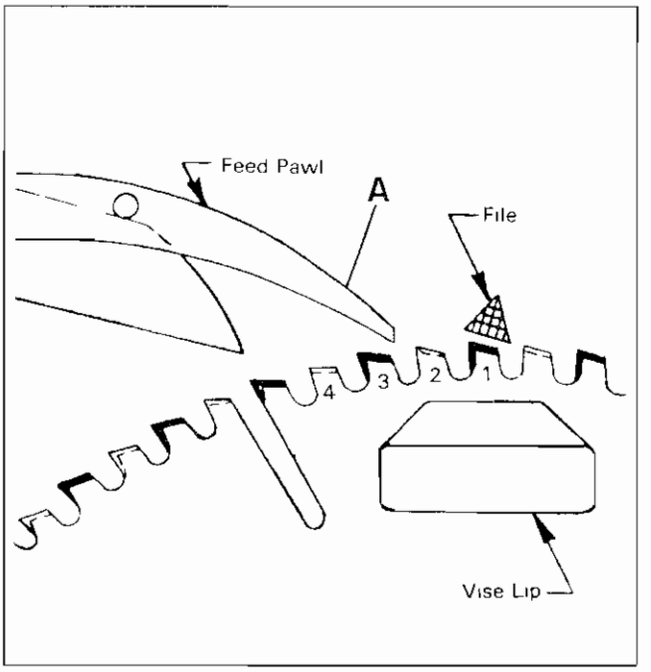
Filing Raker Teeth

14. Set the wing frame at 0°. Use a file that is wide enough to cover the top of the raker tooth.
15. Increase the vise tension slightly. Adjust the file depth and hook angle to match the top of the tooth.
16. Set the jointing guide knob (B) to bring the feed pawl (A) just over the top of the raker tooth. (It will slide into the gullet of tooth #1 of the cross-cut section.)
17. File the raker tooth down 1/64" lower than the tops of the cross-cut teeth as shown.



Instructions for Sharpening Circular Plywood Saws

(Style #1)

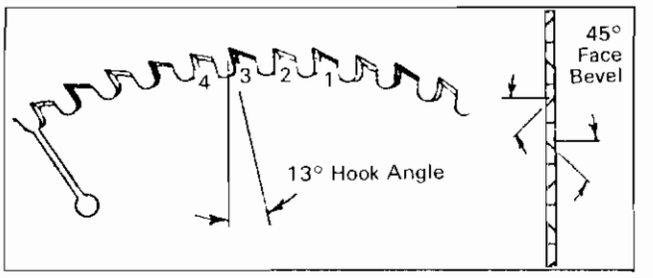


This style of circular saw blade is hollow ground and does not require any "set". The teeth are shaped at a 15° alternate face bevel. If the face and gullets need attention, they must be ground at the alternate 15° angle. The hook angle of the teeth should be 6°.

1. Examine the saw for condition. If gumming is needed, grind at an alternate 15° angle and 6° hook angle. If jointing is required, joint file the blade with the wing frame (K) set at 0°.
2. Select the proper file and file holders. Set the hook pivot arm (I) left 10°. Set the wing frame (K) on 15° right. Set the file depth control.
3. **Feeding the saw.** In order to avoid the feed pawl from jamming in the expansion slots, two steps must be taken:
   a. Feed the saw by pushing on one tooth ahead (to the right) of the tooth to be filed next.
   b. The jointing guide knob (B) must be adjusted clockwise so that the feed pawl cross-pin (A-1) is ⅛" from the tip of the jointing guide (B-3) as the feed pawl (A) touches the saw tooth. At this point the cross-pin (A-1) leaves the guide (B-3) as the saw is pushed by the feed pawl (A).
4. Adjust the feed positioner knob (C) to permit the end of the feed pawl to stop or dwell between teeth 2 and 3.
5. Adjust the feed knob (D) to feed the saw a distance equal to two teeth.
   EXAMPLE: From tooth #1 to tooth #3.
6. Turn on the motor and file all the **"Right Bevel"** teeth and count the number of revolutions necessary, to bring the teeth to a sharp point.
7. Next, set the wing frame (K) on 15° left. Set the jointing guide knob and feed positioner knob if necessary, so that the end of the feed pawl rests between teeth 4 and 5 when you are filing tooth 2.
8. File all the teeth to a sharp point, letting the saw revolve the same number of times as when filing the right bevel or until all the teeth are uniform in size.

Instructions for Sharpening Circular Plywood Saws

(Style #2)

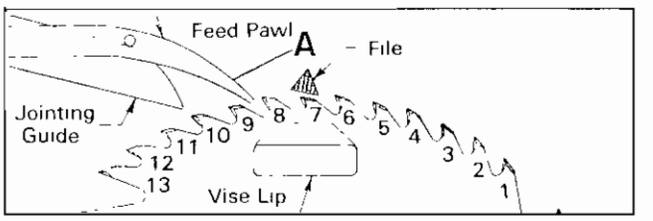


This saw is sharpened in the same manner as Style #1. There are differences in adjustments.

1. The hook angle is 13°.
2. The face bevel of the teeth is 45° (alternate).
3. Top angle — the wing frame must be set on 20° to produce the alternate top bevel angles.

Filing Circular Plywood Saw

(Style #3)



Due to the odd number of teeth in each section of this style blade, the procedure for filing differs in that a section is machine filed, then hand fed to the next section and machine filed. The procedure is repeated until all sections have been filed. The teeth have an alternate face bevel of 5°.

1. Examine the saw for condition. If gumming is required, grind the teeth at alternate 5° angles. If jointing is required, set the wing frame at 0° (straight).
2. Position the wing frame 25° right. Select the proper file and file holders. Set hook pivot arm (I) at 0°.
3. Line up tooth #1 with the file and adjust file depth.
4. Adjust jointing guide and feed positioner (C) so that the end of the feed pawl rests between teeth 2 and 3.
5. Adjust feed knob (D) to feed two teeth after each file stroke.
6. Machine file teeth #1, 3, 5, 7, 9, and 11 — turn off the filer motor and hand crank the filer for filing tooth #13.
7. Grasp the blade and turn it to line up tooth #1 of the next section. Turn on motor and file the odd teeth #1 thru #11 of this section and stop motor. Hand crank the machine for #13. Repeat this procedure for every section, bringing the teeth to a sharp point.
8. Position the wing frame to 25° left.
9. Place tooth #2 under the file and position the end of the feed pawl between teeth #3 and #4. Make necessary adjustments to knobs (B, C, D) as in steps 4 and 5.
10. Machine file teeth #2, 4, 6, 8, 10, and 12. Turn off motor and hand crank to next section and repeat procedure.

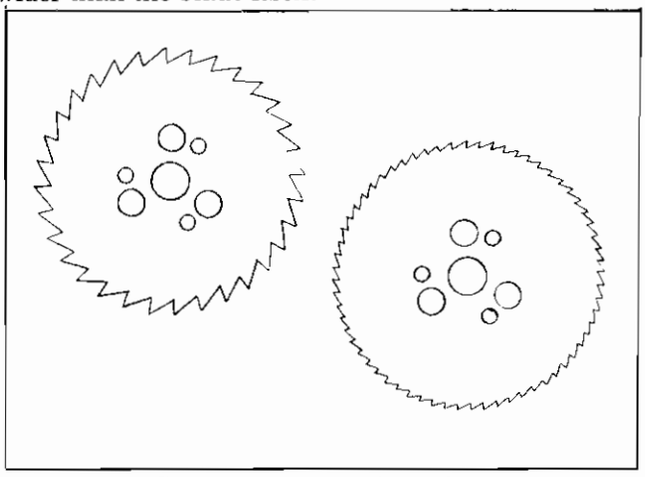
Circular Saw

(Printer Style)

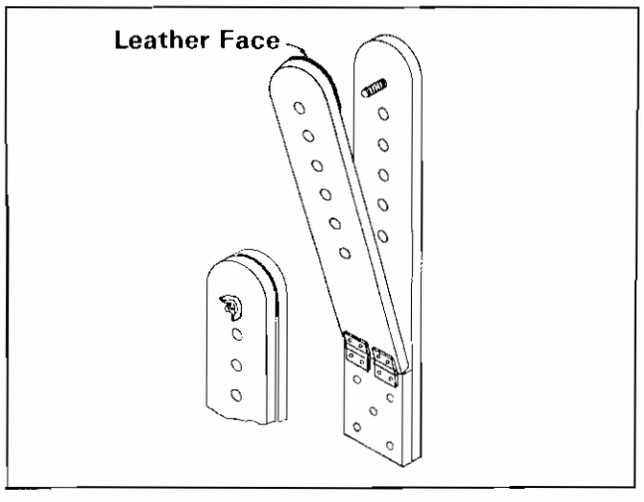
GENERAL

Circular saws used by printers and engravers for cutting lead differ from other saws in that the teeth are generally swaged, rather than being set. Swaging means spreading the tip of the tooth to each side, while setting means bending one tooth to the right and one to the left.

Swaging is done by a saw swage (available at low cost—part #361127 on price list), this being a small piece of steel with a notch in one end, which fits over the tooth. When swage is tapped with a hammer, the V-shaped notch forces the metal at the tooth tip to spread outward, to each side, so that the tooth tip becomes wider than the blade itself.



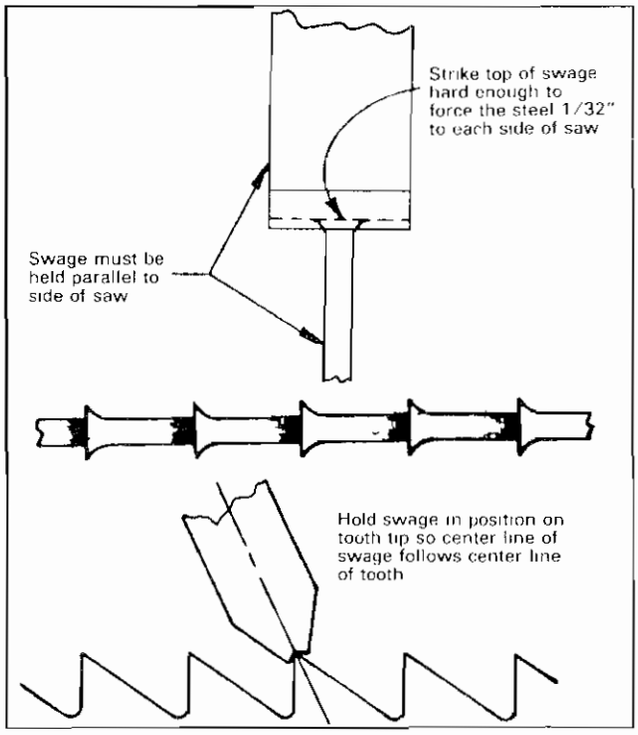
1. When to Swage: If the saw is perfect round and teeth are uniform it may be swaged before filing. Otherwise, swage after jointing, but before finish filing.
2. Swaging Vise: It is necessary to have a wooden vise, to hold saw in an upright position. Such a vise can be made easily from two 2 x 6's rounded at the top and hinged at the bottom so they open and form a vise. Drill a series of holes down the center, starting 2" or 3" from the top. Use an ordinary bolt and wing nut through the hole. Leather-face the inside of vise to prevent wear and damage to saw. Fasten vise to one end of workbench, about elbow height for convenience in use. (SEE BELOW.)



3. Swaging Instructions: Place saw in vise, so teeth extend above vise top. Tighten wing nut so saw is held fairly snug but still loose enough so it will rotate under the force of hammer swaging blow.

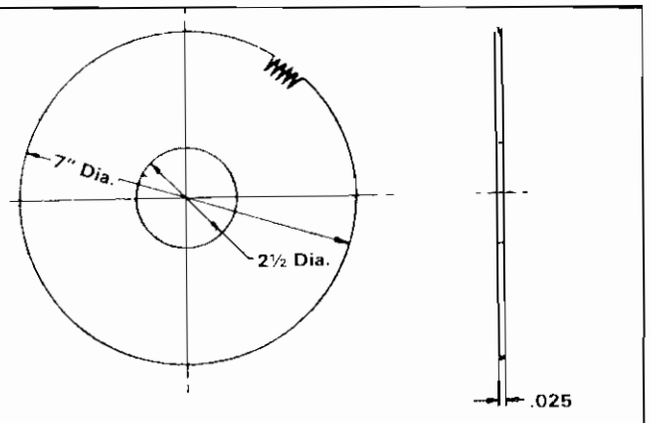
   Hold swage parallel to side of the saw, with center line of swage on the center line of saw tooth, as shown in Figure 2-19. Strike the top of swage hard enough to force the steel 1/32" to each side of the saw tooth.

   Repeat on every tooth. With proper vise pressure, the hammer blow on swage will cause saw to rotate so next tooth is brought into position; it is not necessary to move saw hy hand.

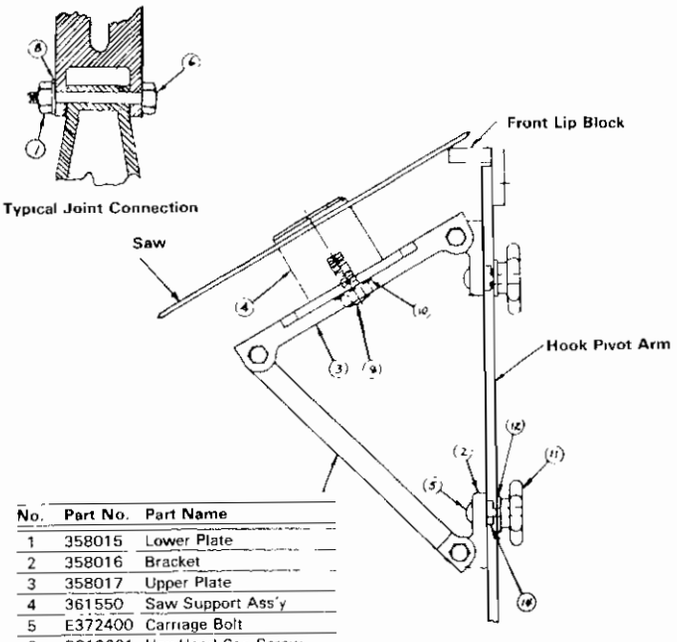


4. Filing: Printers' saws are filed straight across, the same as a hand rip saw. Select a band saw file or diamond point file, in a size to fit the tooth of saw to be filed, because these files produce a semi-rounded gullet. Use of a standard taper file will produce a sharp gullet in which lead will clog. Hook angle should be maintained at 6°.
5. Set Filer at zero on quadrant. Adjust feed and file hook angle to fit the saw. Mark the first tooth with chalk or colored pencil to indicate starting point. File around saw, using light file pressure, until all teeth are even.
6. After the saw has been swaged, following the jointing or straight across filing, replace saw in Foley Filer. Take one or two light file passes on each tooth, to remove the rounding of the tooth tip that was caused by swaging. Crowd the file slightly against front of tooth the first time around, then crowd the next pass of file against the back of tooth, by adjusting the feed adjusting screw.
7. To insure that all teeth have equal spread and will make a uniform cut, saw should be side dressed lightly on the sides of the teeth — using a flat file or honing stone — after swaging and filing has been completed.

Paper Tube Saw (Optional Attachment)



Typical Paper Tube Saw
100 or 200 Teeth Used On Knowlton Tube Winding Machine



No.	Part No.	Part Name
1	358015	Lower Plate
2	358016	Bracket
3	358017	Upper Plate
4	361550	Saw Support Ass'y
5	E372400	Carriage Bolt
6	B313601	Hex Head Cap Screw
7	J311000	Hex Nut
8	R000470	Lockwasher
9	B371001	Hex Head Cap Screw
10	R000471	Lockwasher
11	361457	Handwheel
12	358106	Washer
14	358133	Spacer

GENERAL

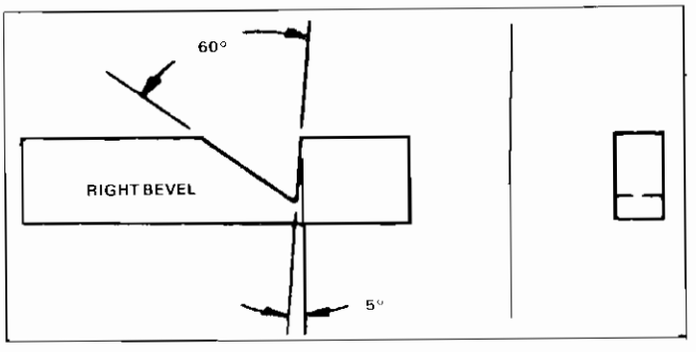
The details of tooth angle and general shape will vary with the manufacture of the paper tube saw. The set-ups shown and general details given will apply to most makes of paper tube saws.

The attachment shown is a 358500 Paper Tube Saw Attachment and must be used with this type of blade.

1. Mount 358500 attachment.
2. Set **Hook Pivot** Arm at "0" degrees.
3. Set filer **Wing Frame** to 12 degrees right.
4. Remove **Vise Arm.**
5. Use a six inch slim taper single cut file.
6. Set file **Hook Pointer** to 5° or to match existing face angle on the teeth.
7. Adjust Jointing Guide to position Feed Finger into gullet just filed.
8. Adjust **Feed Control** to feed the saw one tooth each machine cycle. Note that the face of the tooth being filed is to the left of the file.
9. **General** — Make certain that the saw rests on the top of the fixed vise block. Adjust the flange holding the saw so that the saw has a slight drag on it, when the saw is rotated.
10. Turn the saw over and swing the **Wing Frame** of the **Filer** to 12° left.
11. Readjust the File Pointer to the right and line the file up with the face of the teeth. Face of the teeth should be in the right hand side of the file.
12. Adjust **Jointing Guide** and **Feed Control** to feed one tooth each machine cycle. Note, in the illustration shown, the feed pawl is mounted in the second hole from the bottom in the side plates. Some other positions may be better, depending upon the saw you are sharpening.
13. A hook gage can be made from a piece of steel about ¼ x ½ x 2 inches long. This gage will facilitate the correct hook angle setting of the file. See Fig. 2-22 for appearance of hook gage.

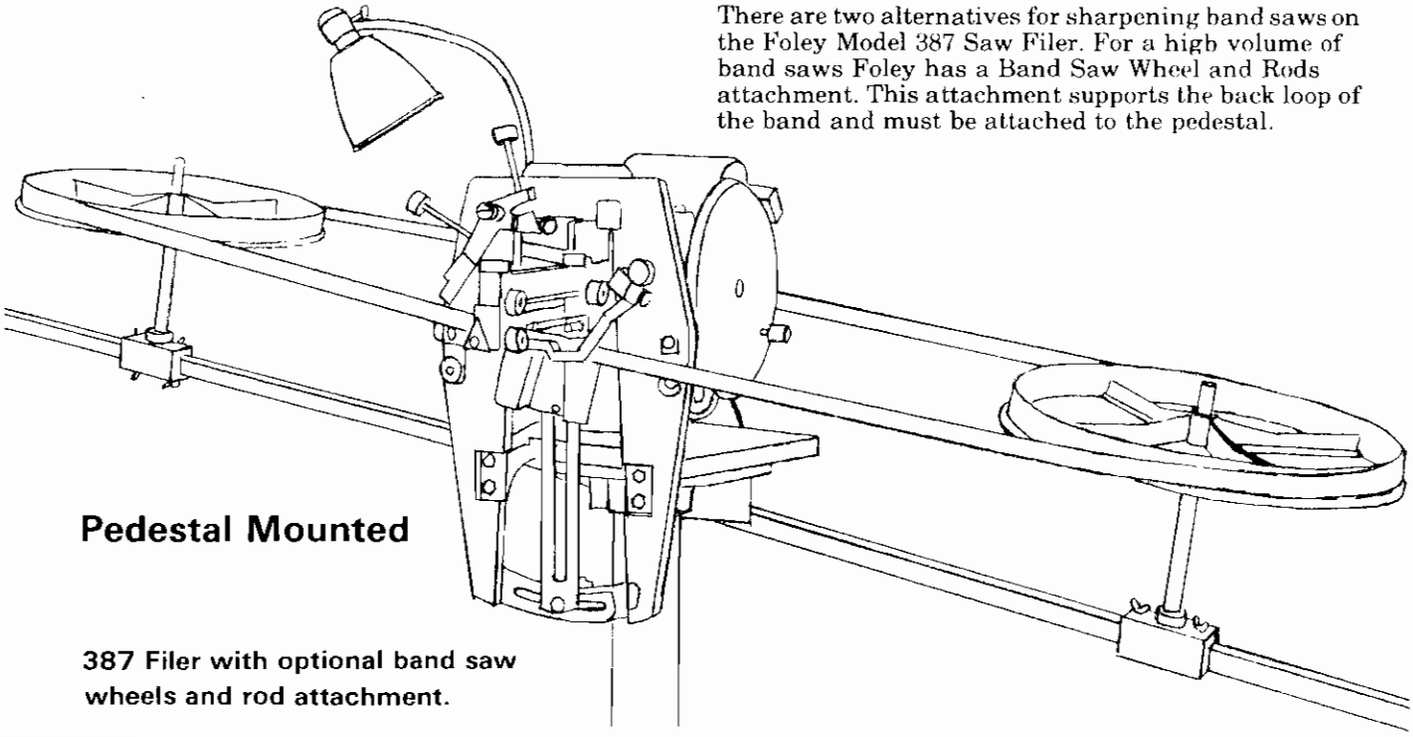
    To use the hook gage, place it on the vise block of the Saw Filer with the notch to the right side of the file when the Filer Wing Frame is swung to the right.

    When the Wing Frame is swung to the left, the notch in the gage block should be to the left i.e. turned around from that shown in illustration.



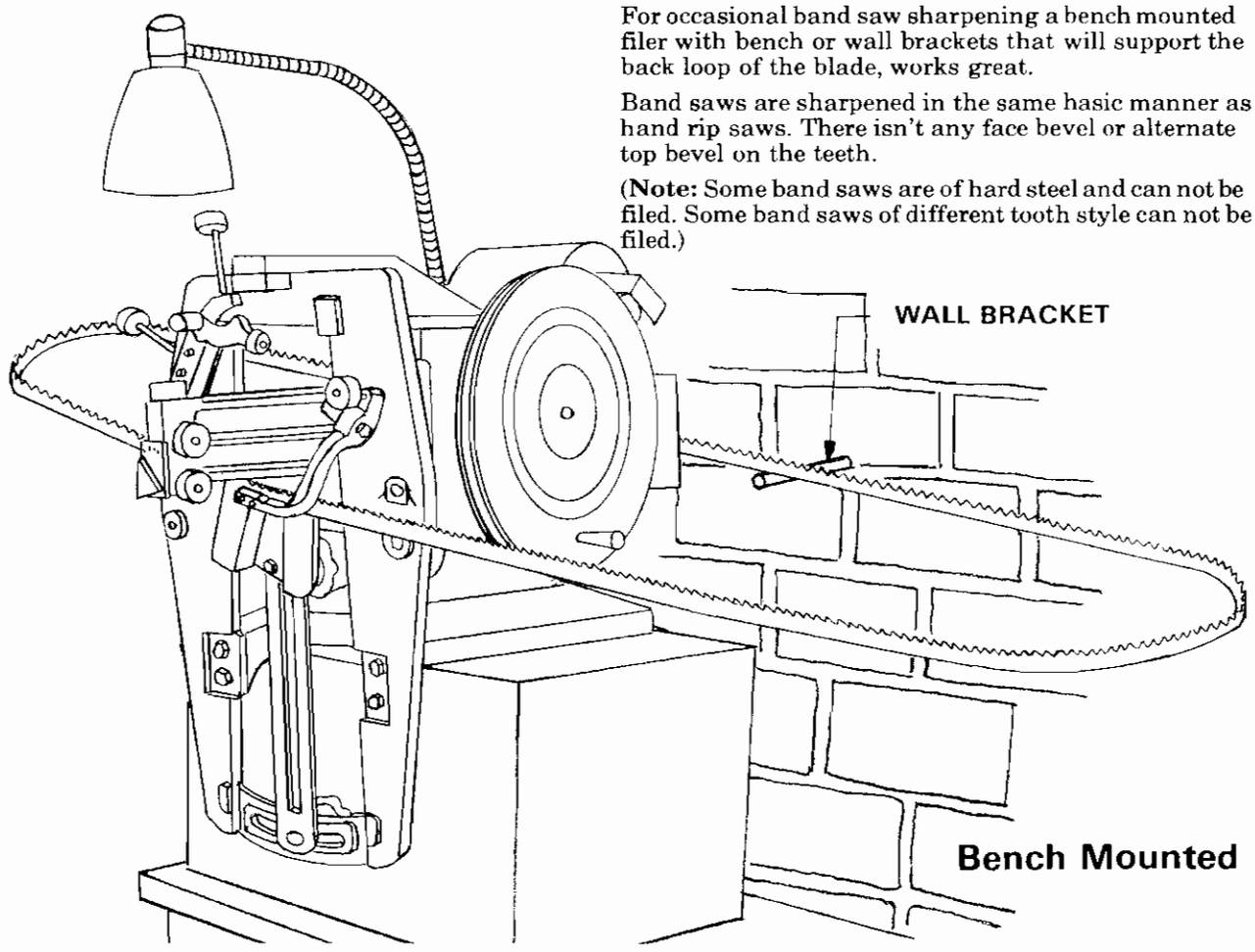
SECTION III
MISCELLANEOUS SAWS

There are two alternatives for sharpening band saws on the Foley Model 387 Saw Filer. For a high volume of band saws Foley has a Band Saw Wheel and Rods attachment. This attachment supports the back loop of the band and must be attached to the pedestal.



Pedestal Mounted

387 Filer with optional band saw wheels and rod attachment.



For occasional band saw sharpening a bench mounted filer with bench or wall brackets that will support the back loop of the blade, works great.

Band saws are sharpened in the same hasic manner as hand rip saws. There isn't any face bevel or alternate top bevel on the teeth.

(**Note:** Some band saws are of hard steel and can not be filed. Some band saws of different tooth style can not be filed.)

Bench Mounted

Band Saw for Cutting Wood

1. Examine the band saw blade. If "set" is required do so.
2. Set the hook pivot arm (I) at 0°.
3. Mount the saw in the filer, making necessary adjustments to band saw attachment (up or down). The bottom of the saw gullets should be approximately 3/32" above the vise lip.
4. Adjust the vise for a moderate drag. Insert a 6" band saw file or triangular point file. **NOTE:** Do not use sharp cornered files such as slim taper because sharp cornered gullets will cause the band saw to crack when used.
5. Set the wing frame (K) on 0°. Adjust file depth for light cuts.
6. Adjust the jointing guide to bring the end of the feed pawl into the gullet just filed.
7. Adjust feed control (D) to feed one tooth each machine cycle. Permit the file to crowd the face of the teeth slightly to the right.
8. Start filing at the point where the band saw ends were welded. Usually the tooth spacing at this location is uneven and special attention must be given. If only half teeth or some portion of a tooth is present, you should file these by hand. (You can also use double feed pawl #387570.)
9. Machine file the blade once around, crowding the face of the teeth slightly.
10. To remove the slight burr on the teeth and produce a really sharp saw, increase the feed slightly, taking a very light pass across the tops of the saw teeth. Start at the welded joint and let the saw feed once around.

GENERAL NOTE: Due to the non-uniform teeth and the thickness of the welded joint, mis-feeding of the saw will occur if the welded joint is permitted to be fed thru the vise lip.

Band Saw for Cutting Meat

A band saw for cutting meat is sharpened in the same manner as a band saw for cutting wood.

The following settings differ from wood saws and should be made.

1. Hook pivot arm (I) set on 10° right to maintain saw in a level plane.
2. Set file hook angle pointer (H-14) on "R".
3. Set wing frame (K) at 0°.
4. "Set" blade if necessary.

Meat Saw Blades (Band Style)

Meat saw blades are also sharpened the same as wood cutting band saws. The following adjustments differ and should be made.

1. Hook pivot arm (I) set on 10° right.
2. File hook angle pointer (H-14) set at "C".
3. Wing frame (K) set on 0°.
4. "Set" if necessary.

Filing Compass and Keyhole Saws

Compass and keyhole saws are small pointed blades used by plumbers, steamfitters and carpenters for making a starting cut or for sawing in close quarters. They can be filed on the Model 387 by means of a special carrier (furnished extra).

Use carrier gauges, the same as when mounting a hand saw, to insure that the blade is positioned at the correct height above the carrier bar. As pictured, the teeth extend above the top of the back plate of the carrier.

Both the front and back plate, as well as the saw itself, passes through the vise jaws. Some keyhole saws are filed straight across, others are beveled about 10°, using the same hook angle as cross-cut hand saws.

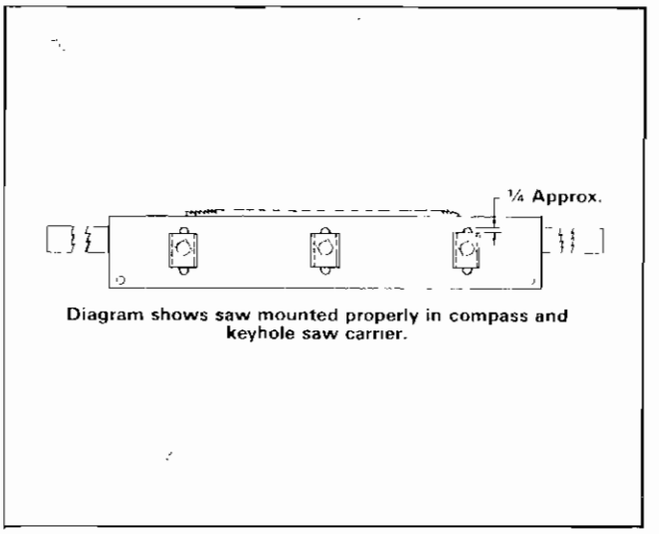
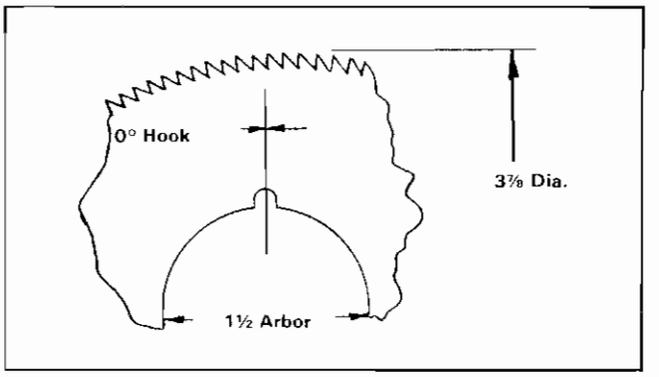


Diagram shows saw mounted properly in compass and keyhole saw carrier.

Scribe Saw 3⅞" Diameter

Requires special Cup #358530. Teeth are spread 11 pts./in. Blade .025" thick. "Set" is .003" to .004" alternately.

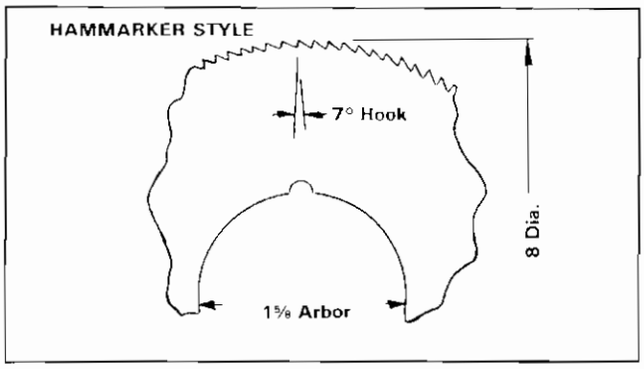


Adjustments to Filer:

1. Examine and joint if necessary.
2. Set Hook Pivot Arm 8° left.
3. Use 6" extra slim taper file.
4. Set Hook angle Control to "R".
5. Set Wing Frame on 0°.
6. Adjust gullets 1/16" above vise lips.
7. Jointing Guide allows Feed Pawl to push on tooth just filed. Feed one tooth at a time.

Scribe Saw 8" Diameter

Teeth 8 pts./in., "set" .003" to .004".

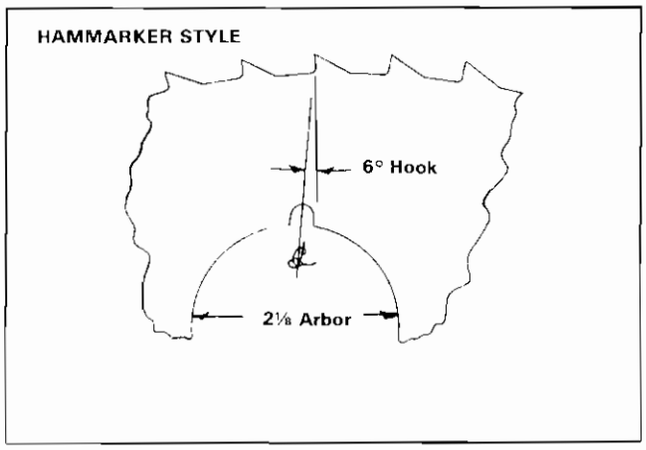


Adjustments to Filer:

1. Examine and joint if necessary.
2. Hook Pivot Arm — 10° left.
3. 6" slim taper file.
4. Hook Angle Control — between "0°" and "R".
5. Wing Frame — 0°. Gullets — 1/16" above vise lips.
6. Feed Pawl — push tooth just filed. Feed one tooth at a time.

Hammarker and Skip Tooth Hog Splitting Saw 12" and 14" Diameter

Special Cup and Cone Assembly #358950. For 12" blade the "set" is .003" to .004". "Set" for 14" is .006" to .007".

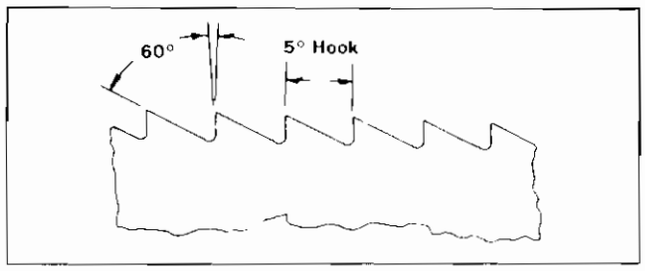


Adjustment to Filer:

1. Examine and joint if necessary.
2. Hook Pivot Arm — 10° left. File Hook Angle Control — between "0" and "R". Wing Frame — 0°. Mount Cone #358100 onto Hook Pivot Arm.
3. Lock special cone #358101 in place using standard cone as lock. Gullets — 1/16" above vise lips.
4. Feed Pawl — push tooth just filed. Feed one tooth at a time.
5. File Depth Control — so a slight vee is filed at the bottom of tooth face. Tooth height — 3/32" after filing tooth top to a sharp point.
6. Use a "safe edge" file (file ground blank on one side) and file gullets to a depth of 3/32". "Safe Edge" should be towards tooth face.

Carcass Saw — 23" of Teeth — 3 Pts./In. — Rip Style

No "set". Hook angle of 5° or 0°. For 5° hook a special attachment is needed. For 0° hook use straight hand saw carrier.

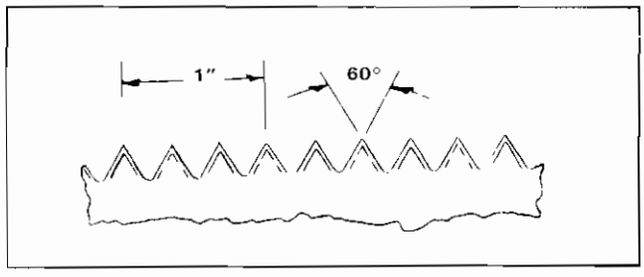


Adjustments to Filer:

1. Wing Frame — 0°.
2. Use band saw file.
3. Feed one tooth at a time pushing on tooth just filed.

Carcass Saw — 23" of Teeth — 4 pts./In. — Cross-Cut Style

No "set". Teeth Have alternate 20° face and back bevel.

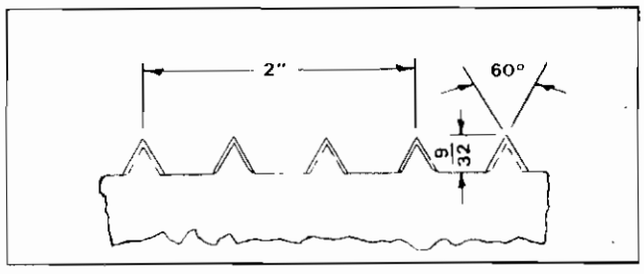


Adjustments to Filer:

1. Straight hand saw carrier. 6" regular taper file.
2. Hook Angle Control — 30°. Wing Frame — 20° right.
3. Feed two teeth at a time pushing on tooth just filed.
4. File every other tooth.
5. Wing Frame — 20° left. Repeat #3 and #4.

Carcass Saw — Skip Tooth Style

2 pts./in., no "set", 20° alternate back and face bevel.



Adjustments to Filer:

1. Straight saw carrier. 6" slim taper file.
2. Hook Angle — 30°. Wing Frame — 20° right.
3. Feed two teeth each time, pushing on tooth just filed.
4. File every other tooth face. Slide carrier to left. File the back of each tooth already filed.
5. Wing Frame — 20° left. Repeat #3 and #4.

SECTION IV

MACHINE MALFUNCTIONS AND CORRECTIONS

1. **PROBLEM:** Jointing Guide set too high and the feed pawl slips over the top of the teeth.

1a. **CORRECTION:** Re-adjust Jointing Guide to permit feed finger to push lower down on the tooth, near the bottom of the gullet.

PROBLEM: Jointing Guide set too low and the feed finger picks up one tooth behind, i.e. feed pawl hits top of preceding tooth, rather than dropping into gullet of tooth just filed.

2a. **CORRECTION:** Raise Jointing Guide to permit feed finger to clear top of preceding tooth, just before dropping into gullet of tooth just filed.

3. **PROBLEM:** Jointing Guide set too far to the right, feed pawl guide pin catches **under** the jointing guide.

3a. **CORRECTION:** Slide Jointing Guide Frame, (387528) to the **left** by loosening the mounting screw on tbe back side of the **Filer Front.**

4. **PROBLEM:** Jointing Guide is hit by File.

4a. **CORRECTION:** Slide Jointing Guide Frame (387528) to the left by loosening the mounting screw in the back side of the **Filer Front.**

5. **PROBLEM:** Feed Pawl slips over teeth near end of feed stroke.

5a. **CORRECTION:** Increase spring tension on end of Feed Pawl. Move Feed Pawl to highest position on (387027 and 387029) side plates.

5b. Check for correct setting of file hook angle.

6. **PROBLEM:** Lack of sufficient feed stroke.

6a. **CORRECTION:** Move Feed Pawl to lowest position on (387027 and 387029) side plates.

7. **PROBLEM: Uneven Tooth Size — Hand Saws.**General — It must be kept in mind that a file will cut easier and faster with the set in the saw teeth than it will **against** the set. In general then, when the Wing Frame is to the **right**, you will be filing against the set in the saw and you can crowd the saw harder to bring the teeth to a sharp point. However, if you crowd the saw hard when the Wing Frame is swung to the left, you will cut the teeth down too much, producing uneven tooth size. Since now you will be filing **with** the set in the saw teeth.

7a. **CORRECTION:** When the **Wing Frame** is swung to the right, crowd the saw to the **right.** Crowd the saw only to the point where the file is cutting free. If two or three passes are necessary to produce sharp points, do so. Note: Overcrowding of the saw with the vise tension set very tight will only ruin files. With the **Wing Frame** swung to the **left**, crowd the saw to the left. Keep in mind that you are filing with the set and the file will be cutting faster and more freely. For this reason, **do not** crowd the saw too much and do not have too much vise pressure. File only enough to bring the teeth to a sharp point.

8. **PROBLEM:** Tooth spacing changes after starting to machine file the saw.

8a. **CORRECTION:** Crowding teeth too hard, decrease feed or vise tension.

8b. Change feed, the file is crowding the saw the wrong way. See **Uneven Tooth Size.**

8c. Saw should have been jointed out before finish filing, tooth size is not uniform.

8d. Feed Pawl is positioned in the wrong hole of the 387027 and 387029 side plates. Move to second hole from bottom for hand saws.

8e. Feed Finger is slipping up back side of teetb, increase spring tension on back of Feed Pawl.

8f. Feed Pawl has worn on end, regrind end of Feed Pawl.

8g. Carrier bar on saw is kinked and is jamming in vise blocks. Straighten or replace.

8h. Too much vise pressure — pull carrier bar with saw mounted on it thru the vise. There should be a uniform drag on the carrier bar the full length of the saw blade.

8i. Feed controls are changing their settings. Check for sufficient drag on Feed Control Knobs.

8j. Jointing Guide Frame is loose. The mounting screw on the back of the Filer Front must be tight.

8k. The tops of saw teeth are not in the same line as the top edge of carrier bar.

PROBLEM: Erratic filing of the saw.

9a. **CORRECTION:** Check for side play in File Arm. Adjust shaft 387033 all the way in to remove side play.

9b. Check file pressure. Decrease if cutting heavy.

9c. Check Jointing Guide Frame. The mounting screw on back of Filer Front must be tight.

9d. Check front file holder locking knob — it may be loose. Check lock knobs in file holder — they may be loose.

9e. Check rocker arm ball for roundness.

9f. Check wear on top of 387050 lift plate.

9g. Check friction drive wheel for slippage.

10. **PROBLEM:** Short File life.

10a. **CORRECTION:** Decrease file pressure. Keep in mind that a file can remove only so much metal on one file pass. Excess file pressure will only decrease file life, ruin the accuracy of the saw tooth spacing and produce excessive burrs on the cutting teeth of the saw. Excess file pressure can ruin a file in one pass.

10b. Check vise pressure — excessive vise pressure will result in uneven feeding of the saw. The condition is aggravated by kinked or bent saws and carrier bars.

11. **PROBLEM:** Saw teeth will not come up to a point.

11a. **CORRECTION:** Check file for sharpness, it may be worn out.

11b. Increase vise pressure — saw moves away from file too freely.

11c. Increase crowding of saw teeth — change feed settings or vise pressure — or both.

12. **PROBLEM:** Flat gullet between the saw teeth.

12a. **CORRECTION:** Crowding teeth too much — decrease the feed.

12b. Failing to lower the file — change file depth of cut especially when more than one pass across the teeth of the saw is necessary.

12c. Excessive vise pressure — saw unable to move away from file slightly on file stroke.

12d. Crooked file.

13. **PROBLEM:** File not cutting its full length.

13a. **CORRECTION:** File holder is not properly adjusted — re-adjust so that the file just touches the bottom of the gullet at the beginning of the file stroke. The outboard end of the file holder (end nearest the operator) should be adjusted slightly lower than the inboard end. Note: Consider the taper in the file when setting file depth. These adjustments will permit the file to cut the full length of the file.

14. **PROBLEM:** Saw skips out from under the file — circular saws.

14a. **CORRECTION:** When sharpening cross cut circular saws, a heavy vise pressure is necessary when the Wing Frame of the filer is swung to the right. Increase vise pressure and decrease file pressure if saw persists in skipping to the left and out from under the file.

15. **PROBLEM:** File drops out of file holder.

15a. **CORRECTION:** Check for correct file holder. You may have selected the wrong holder for the file you are using. Refer to page 8 for holder selection and page 9 for file descriptions.

15b. Excessive file pressure — reduce feed or file pressure or both.

15c. Tang of file too long for the hole in the front file holder and the file does not seat properly. Shorten tang of the file.

15d. End of file too large for rear file holder and the file does not seat into holder. Check file holder selection. Also consider grinding end of file to fit the holder.

PARTS LIST No. 387-68

For Model 387 Foley Automatic Saw Filer

PARTS IDENTIFICATION: Exploded-view drawing shows standard parts as well as accessories and supplies for the Model 387 Foley Automatic Saw Filer. Items are identified by a "part number."

Locate on exploded-view drawing the part wanted, and note the diagram number with which it is marked. Then refer to parts listing. First column contains *diagram number,* second column states the *part number,* and third column lists the *part name* or description.

EXAMPLE: You need a flywheel pinion, and a cam shaft gear. Obtain diagram numbers from drawing. In this instance, the diagram number for the flywheel pinion is No. 14, and the diagram number for the cam gear is No. 56. Catalog listing shows correct *part number* and *part name,* as follows:

Example of Parts List:

Diagram Number	Part Number	Part Name or Description
14	358037	Flywheel Pinion
56	387056	Cam Shaft Gear

In ordering, specify No. 358037 *Flywheel Pinion,* and No. 387056 *Cam Shaft Gear. Do not order by diagram number.* Specify *part number* and *part name,* not the diagram number.

Example of How to Order:

Quantity	Part Number	Part Name or Description
1	358037	Flywheel Pinion
1	387056	Cam Shaft Gear

TRANSPORTATION CHARGES: All prices in the list are postpaid (via regular parcel post) to any destination within the continental United States. For delivery to Alaska, Hawaii, Puerto Rico, Canada, and Mexico, add 10 per cent.

No return of parts, for either replacement or credit, can be accepted without written authority, and a 10 per cent re-stocking charge is assessed on any return which may be authorized.

A worn part may be submitted without written authorization, as sample of replacement that is needed, if new part wanted can be identified in no other manner. However, the sending of a sample part is likely to delay shipment. Whenever possible, order replacement parts by correct *part number and name,* as obtained from illustrated parts list.

CHANGES AND REVISIONS: The right is reserved to make design, materials, and construction changes on all Foley machine parts without notice.

The Price List covers parts for the current Model 387 Foley Automatic Saw Filer only. Replacement parts for earlier models are contained in a separate parts folder — copy available upon request. Be sure to state *Model* and *Serial Number* of machine for which parts price list is wanted.

Telephone Foley, TOLL-FREE at Phone No. 800-328-7140

SAVE TIME

To permit fast shipment of replacement parts and operating supplies for Foley machines, please observe the following precautions:

1. Order by correct PART NUMBER — not by Diagram Number or Description alone.

2. Use special Foley Order Blanks — which are arranged for easy use and accurate description listing. It takes longer to fill orders that are not written on Foley Order Blanks, because they must be analyzed, billed, and checked before being shipped.

   If you need up-to-date price lists and special order blanks, just request them — being sure to state the Model and Serial Number of the machine for which parts list is wanted.

3. Order Early: Watch your supplies, and order in advance whenever possible. Remember that it takes several days for an order to arrive by mail and to be filled, and for the merchandise itself to reach you by parcel post.

4. Write nothing but YOUR ORDER on Foley Order Form. Enclose a separate sheet for other correspondence — being sure that it, also, gives your name and complete address.

   (Any message written on the order form may delay shipment while the message is being answered.)

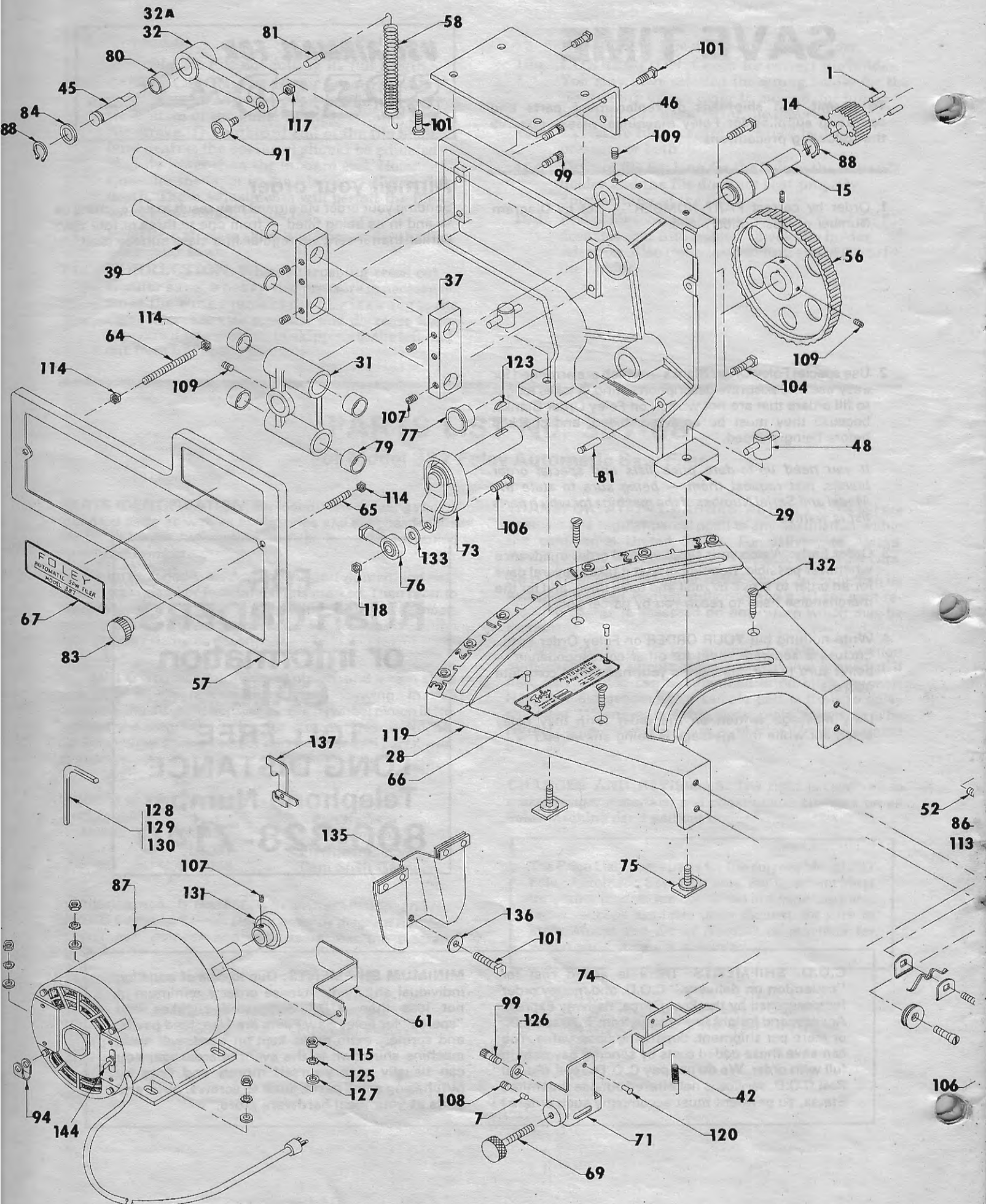
Airmail your order

Sending your order via airmail may result in its reaching us — and in its being filled — from one to three or four days earlier than if sent via regular first class surface mail.

FOR
RUSH ORDERS
or information
CALL
TOLL FREE
LONG DISTANCE
Telephone Number
800-328-7140

C.O.D. SHIPMENTS: There is added cost for "**collection on delivery.**" C.O.D. and money order fees assessed by the Post Office, Railway Express Agency, and freight lines range from $.70 to $2.00 or more per shipment, depending upon value. You can save these added costs by sending payment in full with order. **We do not pay C.O.D. fees.** (Parcel Post C.O.D. service is not offered outside the United States, so payment must accompany such orders.)

MINIMUM SHIPMENTS: Due to cost of handling individual shipments, please order a minimum of not less than $10.* Suggested supplies and "spares" for Foley Saw Filers are files, feed pawls, and springs; extra parts, kept on hand, will avoid machine shutdown in the event of breakage. **You can usually save yourself money and time by purchasing small parts, such as screws, nuts, and bolts at your local hardware store.**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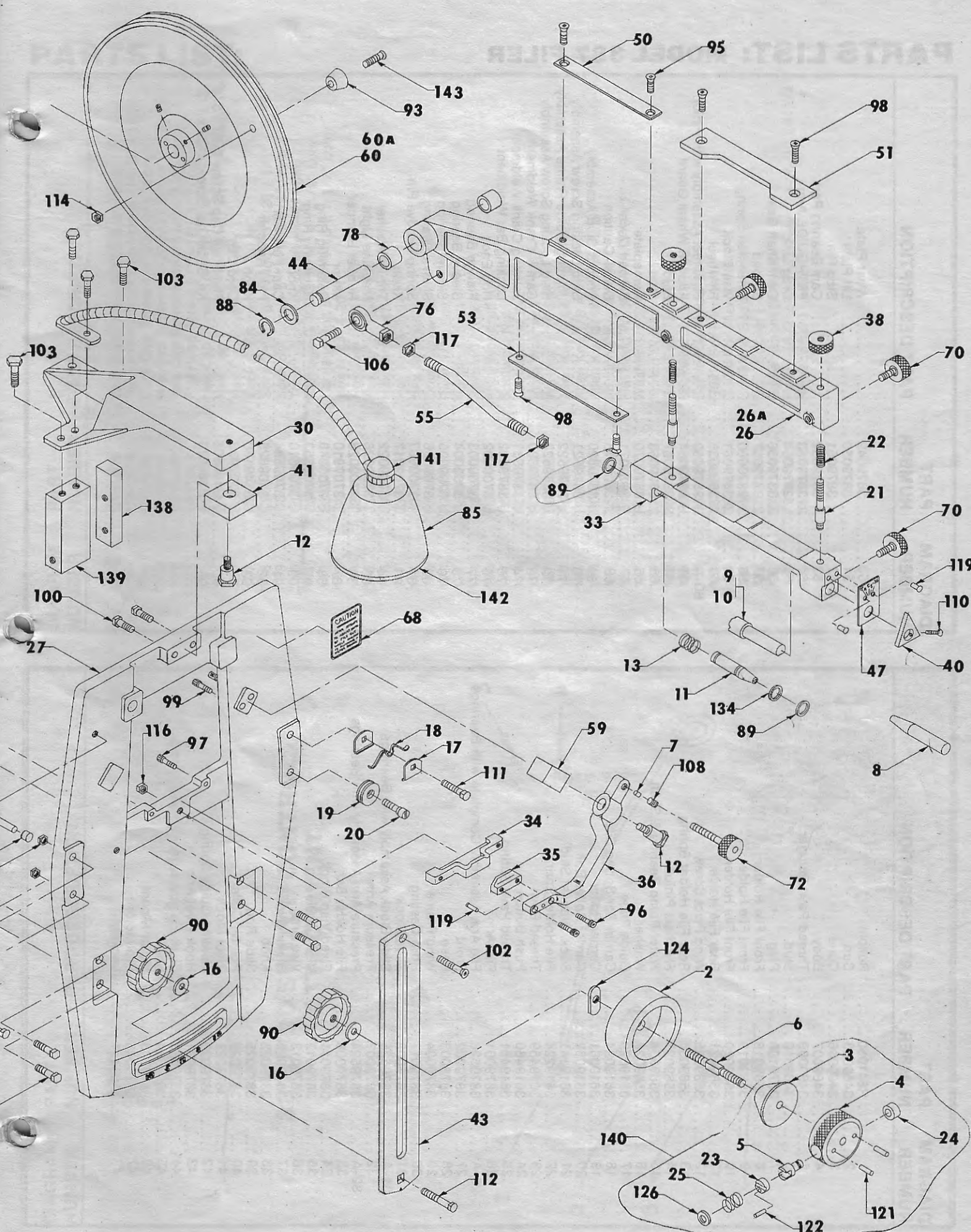
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DIAGRAM NUMBER	PART NUMBER	PART DESCRIPTION
1	R841050	Rollpin
2	3469003	Cup
3	3469006	Cone
4	3469007	Body
5	3469009	Thread Pawl Plunger
6	3469010	Stud
7	3579109	Plug
8	3589018	Front File Holder
9	3589019	Front File Holder
10	3589020	Front File Holder
11	3589021	Rear File Holder
12	3589025	Wing Pivot Screw
13	3589034	Rear File Holder Spring
14	3589037	Flywheel Pinion
15	3589054	Water Pump Bearing & Shaft
16	3599028	Washer
17	3619023	Guide Plate
18	3619024	Carrier Bar Spring Clip
19	3619061	Carrier Roller
20	3619062	Carrier Roller Bolt
21	3619141	Sock. Bracket Stud
22	3619224	File Holder Spring
23	3619459	Thread Pawl
24	3619460	Push Button
25	3619461	Thread Pawl Spring
26	3879001	File Arm
26-A	3879526	File Arm Assembly Complete with Bearings
27	3879002	Front
28	3879003	Base
29	3879004	Wing Frame
30	3879017	Horn Casting
31	3879006	Slide Block
31-A	3879525	Slide Block Assembly with Bearings
32	3879007	Pressure Arm
32-A	3879524	Pressure Arm Assembly with Bearings
33	3879008	File Holder Bar
34	3879011	Fixed Vise Block
35	3879012	Vise Lip Block
36	3879013	Vise Arm
37	3879020	Block-Slide Rod
38	3879023	Knob
39	3879025	Slide Rod
40	3879026	Pointer Collar
41	3879028	Pivot Block
42	3879030	Jointing Guide Spring
43	3879031	Hook Pivot Arm
44	3879033	Shaft
45	3879034	Shaft
46	3879043	Motor Mount
47	3879045	Protractor
48	3709111	Locknut

DIAGRAM NUMBER	PART NUMBER	PART DESCRIPTION
50	3879049	Wear Plate
51	3879050	Lift Plate
52	3879051	Stop Pin
53	3879052	Cam Bearing Pad
54	3879053	FILE-GUIDE Arm
55	3879054	Drag Link
56	3879056	Cam Shaft Gear
57	3879057	Shroud
58	3879060	Extension Spring
59	3879061	Vise Block
60	3589038	Flywheel
60-A	3879550	Flywheel Assembly with Pinion
61	3879064	Friction Wheel Guard
64	3879067	Stud
65	3879068	Stud
66	3879070	Nameplate
67	3879071	Shroud Decal
68	3879076	Decal-Caution
69	3879520	Knob & Stud Assembly
70	3879521	Stud Locking Screw Assembly
71	3879522	Jointing Guide Frame Assembly
72	3879523	Stud Locking Screw Assembly
73	3879530	Cam & Crank Weldment
74	3879531	Jointing Crank Weldment
75	3879532	Locking Bar Weldment
76	3709002	Rod Ends
77	3709003	Flange Bearing
78	3709004	Sleeve Bearing
79	3709005	Sleeve Bearing
80	3709006	Sleeve Bearing
81	3709007	Spring Groove Pin
83	3709017	Knob
84	3709022	Thrust Washer
85	3709026	Machine Light
86	3709028	Rubber Bumper
87	3707810	Motor
88	3709348	Retaining Ring
89	3709353	Retaining Ring
90	3709510	Knob
91	3709594	Cam Follower
92	3709625	Plug Adapter
93	3149180	Knob
94	3707933	Cord Clip
95	B160605	Flat Sock Cap Screw 8-32 x 3/8"
96	B161011	Kn Sock Cap Screw 8-32 x 1/2"

DIAGRAM NUMBER	PART NUMBER	PART DESCRIPTION
1	3879096	Switch Control
2	3879180	Switch
3	3709132	Push On
4	3709133	Clamp
5	A190402	Rd Hd Mach Screw 10-24 x 1/4" Long

3870590 SWITCH CONTROL ATTACHMENT

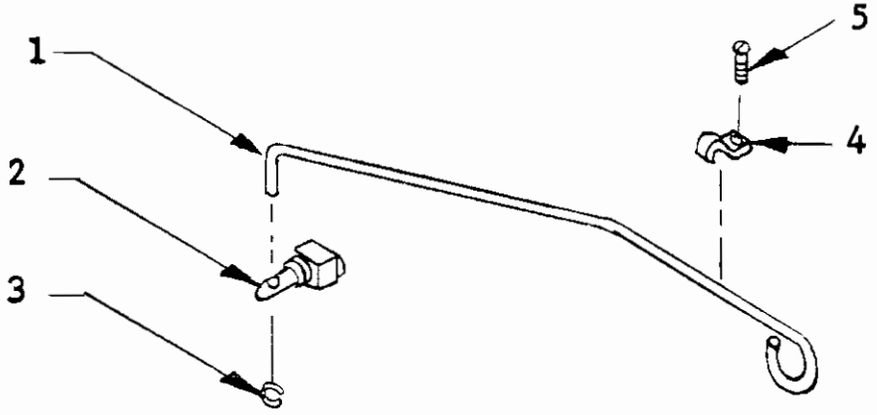
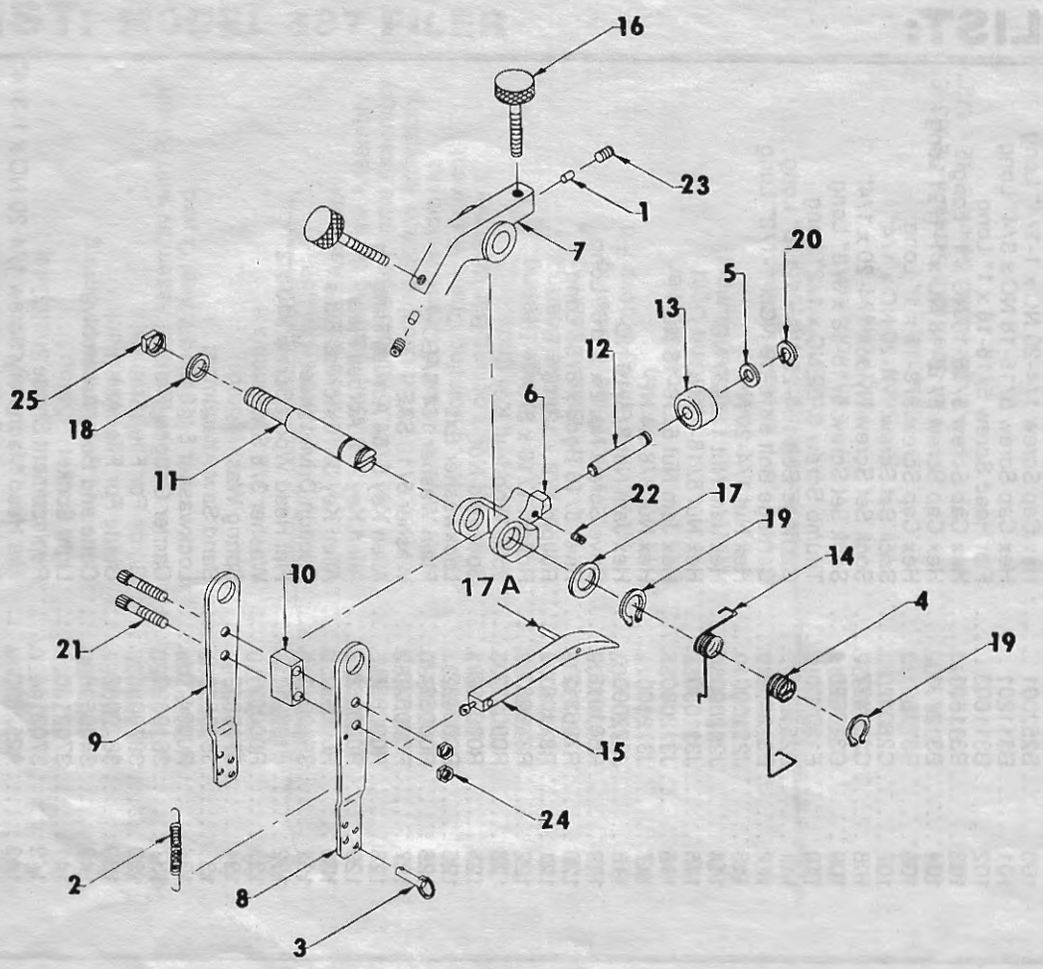


DIAGRAM NUMBER	PART NUMBER	PART DESCRIPTION
97	B161206	Sock Cap Screw 8-32 x 3/4" Long
98	R000873	Button Head Sock Cap Screw 1/4-20 x 1/2"
99	B251206	Sock Cap Screw 1/4-20 x 3/4" Long
100	B252001	Hex Cap Screw 1/4-20 NC x 1-1/4" Long
101	B311201	Hex Cap Screw 5/16-18 NC x 3/4" Long
102	B311603	Flat Head Screw 5/16-18 x 1" Long
103	B311601	Hex Cap Screw 5/16-18 NC x 1" Long
104	B312401	Hex Cap Screw 5/16-18 NC x 1-1/2" Long
106	B371601	Hex Cap Screw 3/8-16 x 1" Long
107	C250420	Sock Set Screw 1/4-20 NC x 1/4"
108	C250427	Sock Set Screw Nylock 1/4-20 x 1/4"
109	C310620	Sock Set Screw 5/16-18 x 3/8" Long
110	E130809	Thumb Screw 6/32 NC x 1/2" Long
111	E251800	Carriage Bolt 1/4-20 NC x 1-1/8" Long
112	E312400	Carriage Bolt 5/16-18 NC x 1-1/2" Long
113	J251000	Hex Nut 1/4-20 NC
114	J252000	Hex Jam Nut 1/4-20 NC
115	J311000	Hex Nut 5/16-18 NC
116	J312000	Hex Jam Nut 5/16-18 NC
117	J372100	Hex Nut 3/8-24 NF
118	J372000	Hex Jam Nut 3/8-16 NC
119	R601018	Drive Screw No. 2 x 3/16" Long
120	R785312	Rivet 5/16 Body x 3/8" Long
121	R841081	Rollpin 1/8 x 13/16"
122	R848037	Rollpin 1/16 x 3/8"
123	R000223	#505 Woodruff Key
124	R000390	Spotweld Nut
125	R000482	Lockwasher Ext.
126	R000524	Plain Washer 1/4 SAE
127	R000526	Washer 5/16 SAE
128	R000855	Allen Key 5/64 Across Flats
129	R000856	Allen Key 1/8 Across Flats
130	R000857	Allen Key 3/16 Across Flats
131	3589043	Friction Drive Wheel
132	E193211	Flat Head Wood Screw #10 x 2"
133	R000527	Washer 3/8 SAE
134	3709859	Spring Washer
135	3580540	Band Saw Attachment
136	R000470	Lockwasher 5/16 Med.
137	3619099	Carrier Gauges (Pair)
138	3879086	Guide For Filer Arm
139	3879087	Guide For Filer Arm
140	3469506	Cone and Body Assembly
141	3702188	Light Socket
142	3702144	Replacement Shade
143	A252803	Flat Head Machinery Screw 1/4-20 NC x 1-3/4"
144	3879180	Replacement Switch

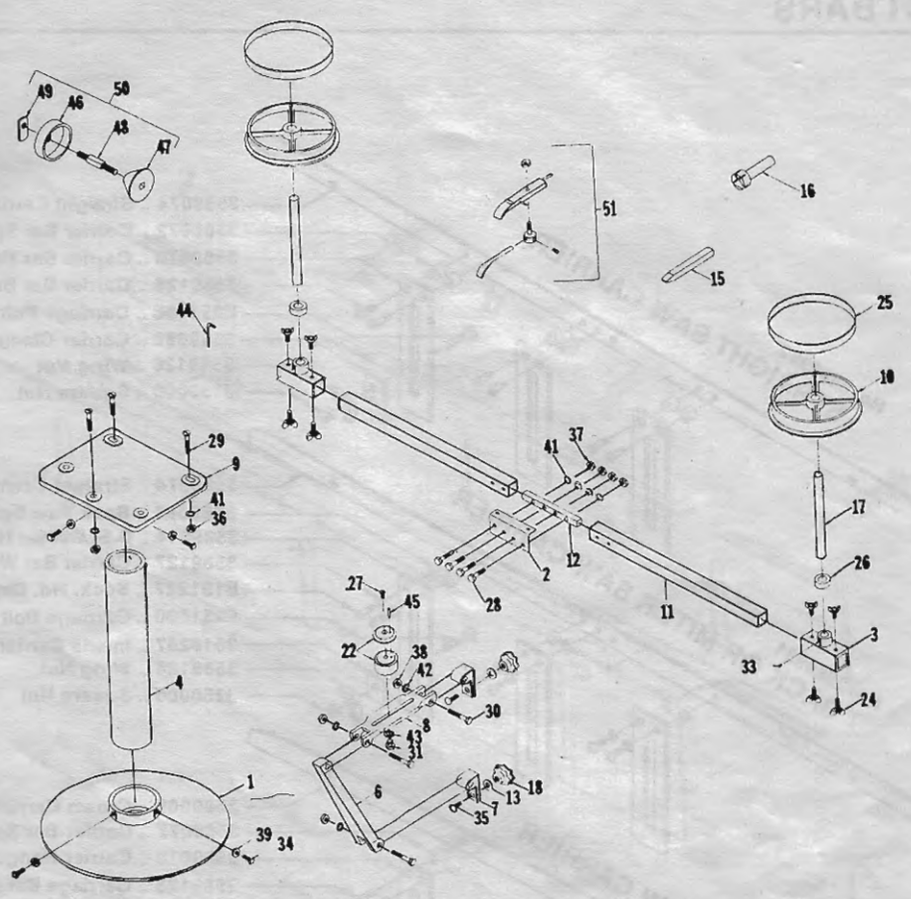


EXPLODED VIEW NO. 3

PARTS LIST FOR FEED MECHANISM ON MODEL 387 FILER

DIAGRAM NUMBER	PART NUMBER	PART NAME
1	3579109	Plug
3	3589048	Feed Pawl Pivot Pin
4	3589071	Rocker Arm Spring
5	3589109	Washer
6	3879009	Rocker
7	3879010	Rocker Arm
8	3879027	Front Side Plate
9	3879029	Back Side Plate
10	3879032	Spacer - Side Plate
11	3879044	Rocker Shaft
12	3879058	Ball Shaft
13	3879059	Rocker Arm Ball
14	3879063	Rocker Spring
15	3879598	Feed Pawl Assembly
16	3879520	Knob & Stud Assembly
17	3879022	Thrust Washer

DIAGRAM NUMBER	PART NUMBER	PART NAME
17-A	R841125	Feed Pawl Cross Pin
18	3709027	Thrust Washer
19	3709348	Retaining Ring
20	3709750	Retaining Ring
21	B192006	Sock Cap Screw 10-24 NC x 1-1/4"
22	C160320	Sock Set Screw 8-32 x 3/16" Long
23	C250427	Sock Set Screw Nylok 1/4-20 NC x 1/4"
24	J192000	Hex Jam Nut 10-24 NC
25	J502000 ...	Hex Jam Nut 1/2-13 NC
	3879550	Flywheel Assembly
	3879526	File Arm
	3879584	Jointing Guide Assembly Right Hand
	3879016	Filer Front Right Hand
	3879015	Vise Arm Right Hand
	3879082	Rocker Spring Right Hand
	3879582	Feed Pawl Right Hand



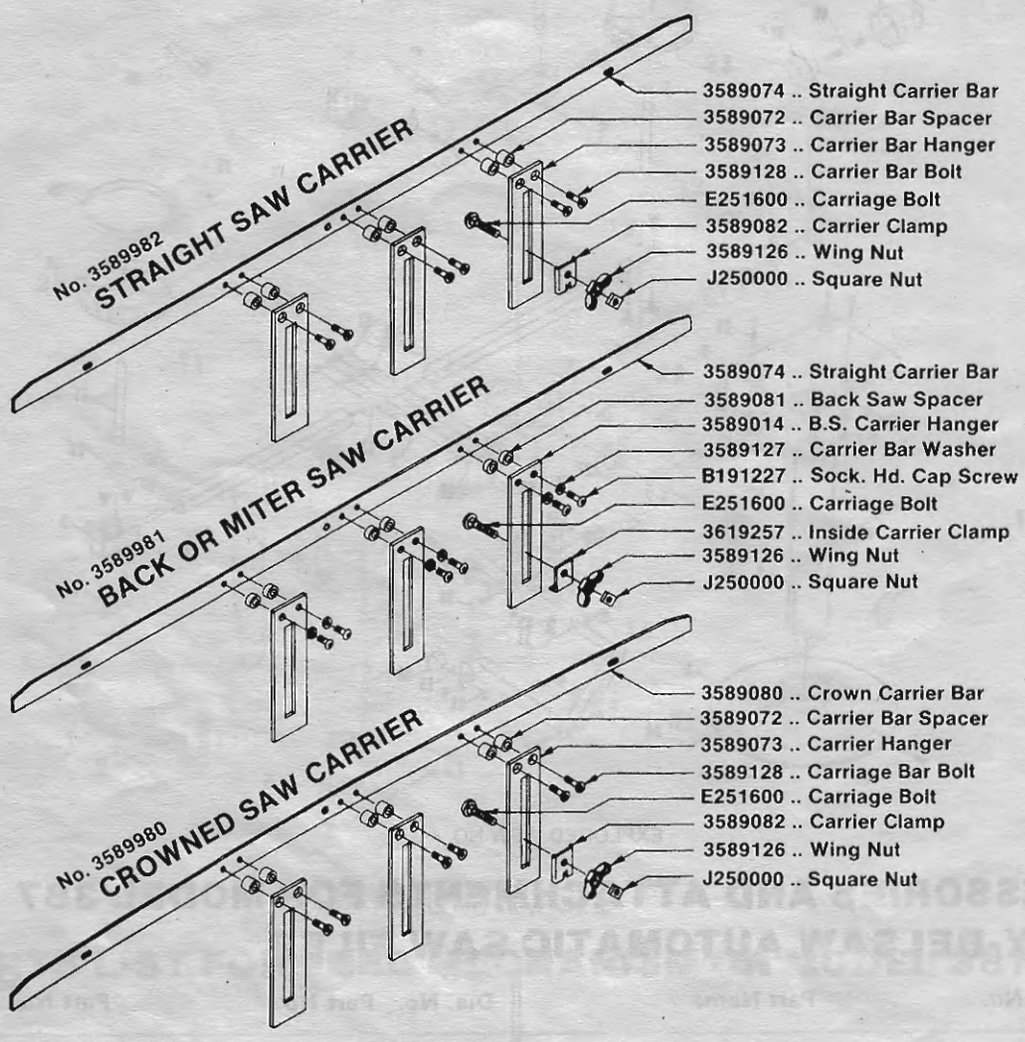
EXPLODED VIEW NO. 4

ACCESSORIES AND ATTACHMENTS FOR MODEL 387 FOLEY-BELSAW AUTOMATIC SAW FILER

Dia. No.	Part No.	Part Name
1	3149064 ..	Pedestal Base
2	3589010 ..	Band Saw Bracket
3	3589011 ..	Wheel Support
4	3589012 ..	Leg
6	3589015 ..	Lower Plate
7	3589016 ..	Bracket
8	3589017 ..	Upper Plate
9	3589068 ..	Base
10	3589078 ..	Band Saw Wheel
11	3589084 ..	Bar
12	3589085 ..	Inner Bar
13	3589091 ..	Washer
15	3619127 ..	Saw Swage
16	3619136 ..	Cant Saw File Socket
17	3619306 ..	Band Saw Upright Rod
18	3619457 ..	Handwheel
22	3619550 ..	Saw Support Assembly (Specify Arbor Size)
24	3709191 ..	Wing Screw 1/4-20 NC x 5/8"
25	3709757 ..	Flat Band
26	3709853 ..	Set Collar with Screw
27	A250803 ..	Flat Hd Mach Screw 1/4-20 NC x 1/2"
28	B252801 ..	Hex Cap Screw 1/4-20 NC x 1-3/4"
29	B252803 ..	Flat Hd Cap Screw 1/4-20 NC x 1-3/4"
30	B313601 ..	Hex Cap Screw 5/16-18 NC x 2-1/4"
31	B371001 ..	Hex Cap Screw 3/8-16 NC x 5/8" Long
33	C250520 ..	Sock Hd Set Screw 1/4-20 NC x 5/16"
34	C371600 ..	Square Hd Set Screw 3/8-16 NC x 1"
35	E372400 ..	Carriage Bolt 3/8-16 NC x 1-1/2"

Dia. No.	Part No.	Part Name
36	J251000	Hex Nut 1/4-20 NC
37	J252000	Hex Jam Nut 1/4-20 NC
38	J311000	Hex Nut 5/16-18 NC
39	J372000	Hex Jam Nut 3/8-16 NC
41	R000469	Lockwasher 1/4 Med.
42	R000470	Lockwasher 5/16 Med.
43	R000471	Lockwasher 3/8 Med.
44	R000856	Allen Key No. 18
45	R841050	Rollpin 1/8 x 1/2
46	3589100	Cup, Special 3-3/4 (Also see 3589950)
47	3589101	Cone, Special 1-3/8 to 3-1/2
48	3469010	Stud
49	R000390	Spotweld Nut 5/16-18 NC
50	3580950	Cone & Cup Assembly (46,47,48,49)
	3589123	Wed Saw File Holder
51	3879570	Double Feed Pawl Assembly
52	3879598	Specify For Double Feed Pawl
53	3879085	Feed Pawl Finger
54	3879101	Feed Pawl Lug
55	R000380	Nyloc Nut
COMPLETE ASSEMBLIES		
	3580500	Paper Tube Saw Attachment Complete
	3580568	Pedestal, Complete
	3589578	Band Saw Wheels and Rods,
	3309530	Cup Assembly (Saws under 4" Diameter)
	3589501	Offset Cup (Saws over 24" Diameter)

ASSEMBLY INSTRUCTIONS FOR CARRIER BARS



ASSEMBLY INSTRUCTIONS FOR CARRIER BARS

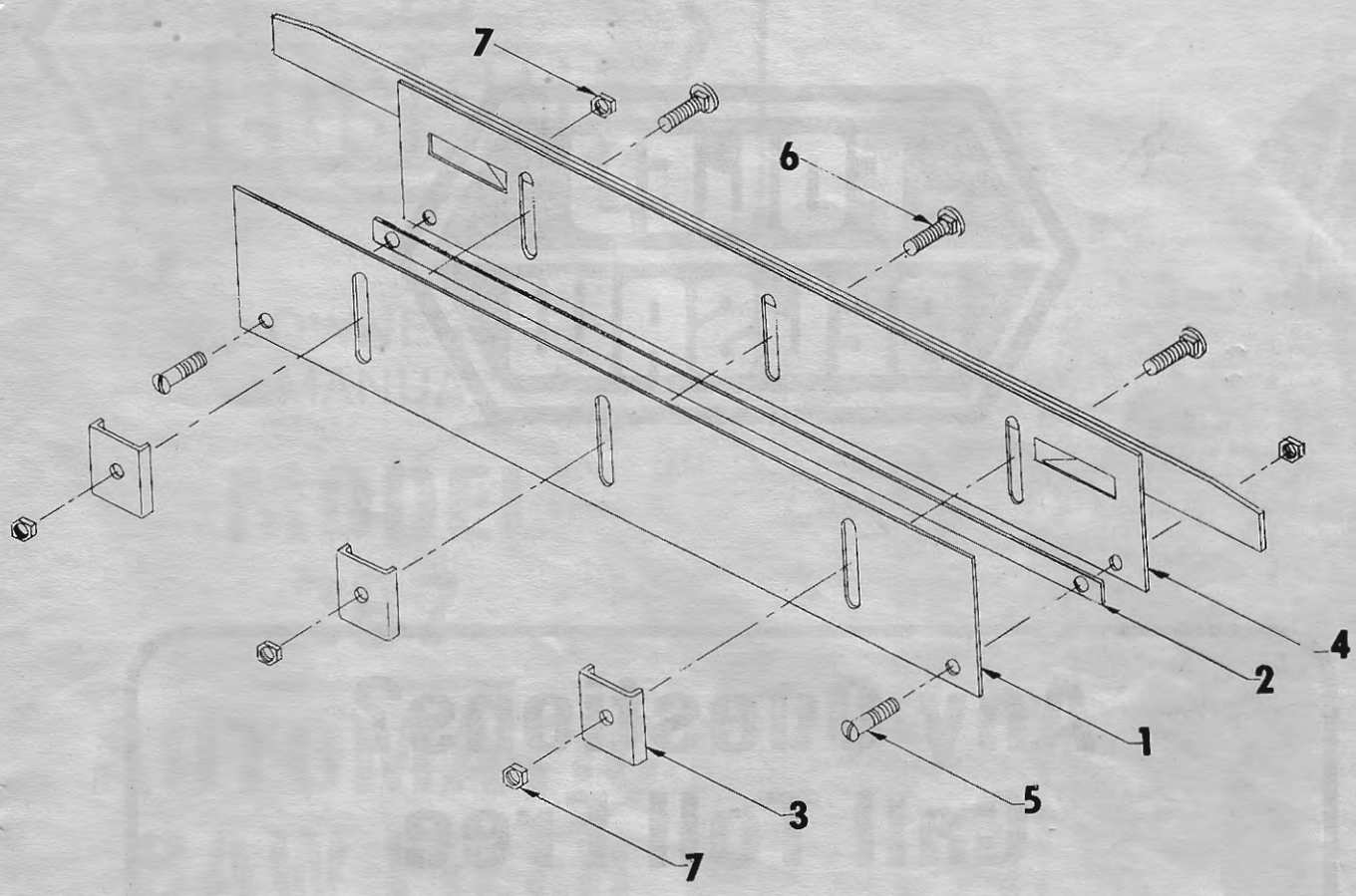
Place the three Carrier Bars on bench with the sheared corner of the bar up or away from you as shown above. **Be sure the 7/32" round hole (approximate center of bar) is to the left of the middle two threaded holes.**

The Straight Carrier 3589074 should be used for assemblies No. 1 and No. 3. The Crown Carrier Bar 3589080 should be used for assembly No. 2.

Use long Spacers 3589072, countersunk Hangers 3589073, and Flat Head Screws 3589128 for assemblies No. 1 and No. 2.

Use short Spacers 3589081, Button Head Screws B191207, Washers 3589127, Hangers 3589014, and Carrier Clamp 3619257 on assembly No. 3 for Back and Miter Saws.

Assembly as shown above. If the screws come through the back of Carrier Bar, file them flush with bar.



EXPLODED VIEW NO. 6

PARTS LIST FOR KEYHOLE SAW CARRIER

DIAGRAM NUMBER	PART NUMBER	PART NAME
1	3619080	Front Plate
2	3619081	Spacer
3	3619258	Outside Carrier Clamp
4	3619504	Key Hole Saw Sub Assembly
5	A259802	Rd Hd Mach Screw 1/4-20 UNC x 1/2" Long
6	E251200	Carriage Bolt 1/4-20 UNC x 3/4" Long
7	J250000	Hex Nut 1/4-20 NC

FOLEY BELSAW

Any Questions? Call Toll Free

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HOW TO SET UP THE MODEL 387 AUTOMATIC SAW FILER TO SHARPEN HAND SAWS

1. Select the correct saw carrier for the type of saw you will be sharpening. Straight, crown or miter box.

2. Insert the saw carrier between the carrier roller and guide plate.

3. Now place the carrier gauges onto the carrier bar--one on each end.

4. Place your saw onto the saw carrier, with the handle to the right, making sure the carrier gauges are in the bottom of the gullet-one on each end of saw.

5. Hold the saw firmly against the carrier gauges and bring up the carrier clamps so that the carrier bolts are touching the back of your saw. Tighten firmly, the wing nut. Remove saw carrier gauges.

6. Advance the saw thru the vise and tighten. Next, hold the end of the saw carrier between your thumb and forefinger and pull. Have the vise tight enough so that your thumb and finger want to slip off the carrier when pulling the saw through the vise.

7. Use the correct file for the type of saw you are sharpening. Refer to the file chart in your Operating Manual.

8. Now adjust your hook pointer. Lay a small file across the file that is in the file arm. Level this resting file so that it is parallel with the carrier bar. Then lock the bottom knob on the file arm.

9. Place the triangular pointer onto the front of file holder (do not use flat spot on file holder), and lock at 30°. Loosen bottom knob on file arm that holds filer from turning, and turn pointer which also turns the file to correct hook angle-C for crosscut, or R for rip.

10. Swing your filer to the right (the flywheel side) and lock it on the desired face angle. Normally 10° to 15° for hand saws.

11. Now mark the first 7 teeth set or leaning forward, with a marking pencil, then turn the flywheel in direction of arrow until file comes down towards saw. Move saw around until file enters into saw in front of the first tooth marked--file should not travel thru tooth.

12. Now loosen the two file depth lock knobs on the side of the file arm--not pointer lock knob. Next, loosen the two knobs on top of the file arm until they are approximately 1/8" above the frame. This allows the file to drop into your saw gullet.

13. Turn the flywheel in the direction of the arrow until the file travels about 2" through the saw. Stop. Turn the flywheel backwards 1/4 of a turn. Stop.

14. Turn the rear depth adjustment knob until it rests on the file arm frame. Now tighten 1/4 of a turn.

15. Now turn the flywheel in the direction of the arrow until the file is about 2" from the other (front) end. DO not back the flywheel up this time, but spin the front depth adjustment knob until it rests on the file arm frame and tighten 1/4 of a turn.

16. Tighten the two file depth lock knobs on the side of the file arm. Your file is now locked in place!

17. Make sure your feed pawl is positioned in third hole from bottom on the feed pawl holding arm, also known as rocker arm.

18. Now adjust your feed pawl guide (also known as jointing guide), by turning the bottom knob clockwise or counterclockwise until jointing guide is parallel with the saw carrier, for a starting point. Also refer to your Operating Manual for this adjustment, Page 14. (7/8", not 5/8" as the manual says.)

19. Turn the feed position knob (the middle one) until the feed pawl is 1/2" away from your file, which should be in the gullet of the saw. DO NOT TOUCH THIS KNOB AGAIN. This adjustment should not have to be done again on any saw (one time adjustment).

20. Put a pencil mark exactly in the middle of your vise lip, make permanent with marker later.

21. Now turn the flywheel in the direction of the arrow with your right hand while holding the feed pawl with your left hand so that the feed pawl does not touch the saw as it moves forward. Also do Step 22 at same time.

22. Now continue turning flywheel forward until feed pawl has traveled to its farthest point.

23. Turn the feed adjustment knob (this is the top one) backwards until the feed pawl is approximately 3/4" to the left of your pencil mark on the vise.

24. Now turn the feed adjustment knob (top knob) forward moving feed pawl towards tooth just sharpened (or first one marked). Also, you must turn jointing guide knob (bottom knob) at the same time by raising or lowering feed pawl so it enters first tooth marked at least 1/64 out of gullet (Or bottom of tooth). DO NOT move saw while making this adjustment. Feed Pawl must just touch tooth.

25. After above adjustment is correct, continue turning feed adjustment knob (top knob) forward until next tooth marked travels to line on vise.

26. The Gullet of this tooth should be in middle of line on vise.

27. Now turn flywheel in direction of arrow. File should enter in front of this tooth - if it does not, you must adjust your feed accordingly. Also move saw by hand until it enters in front of tooth, then do Step 27 over again. Turning knob clockwise will feed saw further.

28. Be sure to crowd the face of this tooth. Your file must be tight against the face of the tooth that is set forward. Slight adjustment of feed knob might be necessary to make sure file is tight against face of tooth. This is called crowding.

29. Turn flywheel in direction of arrow to see if saw is feeding correctly. If file enters into next tooth marked and is tight against the face of this tooth, then turn on your machine and file all teeth set forward.

30. We now sharpen the teeth that are set back! Push the saw back to the starting point. Be sure the bottom of the gullet of the first tooth set to the rear is in line with the pencil mark. This tooth would be the one that is not marked.

31. Swing the filer to the left the same degrees as was used on the first operation. (10°-15°).

32. Advance the feed adjustment knob (top one) 1/4 of a turn forward.

33. Raise the jointing guide by turning the jointing guide knob (bottom) 1/8 of a turn clockwise or forward. If Steps 25 and 26 are followed you are now crowding on the back of the tooth pointed towards you.

34. Turn flywheel in direction of arrow. The feed pawl should push the saw so the next tooth set to the rear should be in line with mark on saw vise. If file enters in front of this tooth correctly, turn your machine on and file approximately 12 teeth. Stop machine.

35. Check tooth height by balancing a flat metal block on top of teeth. If the block leans either direction, (front or back) turn the feed adjustment knob the opposite way the block leans. Note: Turn very, very slightly--over adjustment means trouble!

36. Now finish the saw.

HELPFUL HINTS

1. Use a screwdriver to pry out the four corners of the guide plate so that the edges do not rub against the saw carrier as it goes through the guide plate.

2. Use your thumbs to bend up the carrier bar spring clips so that when the saw carrier is inserted through the guide plates, the springs barely touch the top of the carrier bar. We want very little drag on the carrier when there is no hand saw attached to it.

   Note: These two Operations should only be done when you first set up your filer. You will never have to do them again unless you replace the springs on guide plates.

3. Always crowd on the same side of the file as the machine is off center (or 0°). In other words--you always crowd the tooth set forward. First the face then the back.

4. Don't file too deeply.

5. Make sure the saw is tight in the vise throughout the operation.

COMPOSED BY:
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